

AD-A279 397



**COMPREHENSIVE MONITORING PROGRAM**

Contract Number DAAA15-87-0095

**AIR QUALITY DATA ASSESSMENT REPORT FOR 1989**

**FINAL REPORT**

JUNE 1990

Version 2.1

Volume V

① DTIC  
ELECTED  
MAY 19 1994  
S G D

Prepared by:

R. L. STOLLAR & ASSOCIATES INC.  
HARDING LAWSON ASSOCIATES  
EBASCO SERVICES INC.  
DATACHEM, INC.  
MIDWEST RESEARCH INSTITUTE

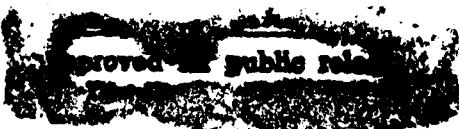
Prepared for:

U. S. ARMY PROGRAM MANAGER FOR  
ROCKY MOUNTAIN ARSENAL

**Rocky Mountain Arsenal  
Information Center  
Commerce City, Colorado**

THE VIEWS, OPINIONS, AND/OR FINDINGS CONTAINED IN THIS REPORT ARE THOSE OF THE AUTHOR(S) AND SHOULD NOT BE CONSTRUED AS AN OFFICIAL DEPARTMENT OF THE ARMY POSITION, POLICY, OR DECISION, UNLESS SO DESIGNATED BY OTHER DOCUMENTATION.

THE USE OF TRADE NAMES IN THIS REPORT DOES NOT CONSTITUTE AN OFFICIAL ENDORSEMENT OR APPROVAL OF THE USE OF SUCH COMMERCIAL PRODUCTS. THE REPORT MAY NOT BE CITED FOR PURPOSES OF ADVERTISEMENT.



# REPORT DOCUMENTATION PAGE

Form Approved  
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED	
	06/00/90		
4. TITLE AND SUBTITLE <b>COMPREHENSIVE MONITORING PROGRAM, FINAL AIR QUALITY DATA ASSESSMENT REPORT FOR 1989, VERSION 2.1</b>		5. FUNDING NUMBERS  <b>DAAA15 87 C 0095</b>	
6. AUTHOR(S)  <b>ROBERT L. STOLLAR AND ASSOCIATES DENVER, CO</b>		8. PERFORMING ORGANIZATION REPORT NUMBER  <b>90230R01</b>	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  <b>ROCKY MOUNTAIN ARSENAL (CO.). PMRMA COMMERCE CITY, CO</b>		8. PERFORMING ORGANIZATION REPORT NUMBER  <b>90230R01</b>	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES			
12a. DISTRIBUTION/AVAILABILITY STATEMENT  <b>APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED</b>		12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words)  <b>THE PURPOSE OF THE AIR ELEMENT OF THE COMPREHENSIVE MONITORING PROGRAM IS TO ESTABLISH AN ON-GOING BASELINE TO 1) VERIFY AMBIENT AIR QUALITY AND 2) EVALUATE PROGRESS MADE IN REMEDIAL ACTIONS. THE PROGRAM CONSISTS OF THREE MODES OF OPERATION:</b> <b>1. YEAR-ROUND AND ROUTINE SEASONAL BASELINE MONITORING OF PM-10, VOC, SVOC, TSP, OTSP, ASBEST, AND METALS</b> <b>2. "HIGH EVENT" MONITORING DURING SPECIFIED METEOROLOGICAL CONDITIONS</b> <b>3. SUPPLEMENTAL MONITORING FOR REMEDIAL AND CONSTRUCTION ACTIVITIES.</b> <b>THIS REPORT IS DIVIDED INTO THE FOLLOWING SECTIONS:</b> <b>1. INTRODUCTION - BACKGROUND, POTENTIAL SOURCES</b> <b>2. LOCAL AIR QUALITY AND METEOROLOGICAL CHARACTERISTICS</b> <b>3. PROGRAM METHODOLOGY - SITING CRITERIA, MONITORING LOCATIONS</b> <b>4. RESULTS OF THE FY89 PROGRAM</b> <b>5. CONTINUOUS AIR MONITORING PROGRAM</b>			
<b>94 5 18 116</b>		<b>94-15018</b>	
14. SUBJECT TERMS  <b>CONTAMINANT SOURCES, HEALTH AND SAFETY, METEOROLOGY</b>		PAGES	
		16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT <b>UNCLASSIFIED</b>	18. SECURITY CLASSIFICATION OF THIS PAGE <b>UNCLASSIFIED</b>	19. SECURITY CLASSIFICATION OF ABSTRACT <b>UNCLASSIFIED</b>	20. LIMITATION OF ABSTRACT

**APPENDIX O**  
**IRA-F Total Suspended Particulates (TSP) Data**

Accesion For	
NTIS	CRA&I <input checked="" type="checkbox"/>
DTIC	TAB <input type="checkbox"/>
Unannounced Justification _____	
By _____	
Distribution / _____	
Availability Codes	
Dist	Avail and/or Special
A-1	

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN UG/M3)

DATE	SITE	TAG NO.	VOLUME M3	TSP CONC	NET WEIGHT
				UG/M3	MG
05/10/89	FC1	18361	1633	42.23	68.95
05/22/89	FC1	18371	1627	47.01	76.5
08/14/89	FC1	18434	1638	43.07	70.55
08/26/89	FC1	22706	1641	47.94	78.7
09/07/89	FC1	22717	1074	104.8	112.5
09/19/89	FC1	22724	1603	33.72	54.05

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN UG/M3)

DATE	SITE	TAG NO.	VOLUME	TSP CONC	NET WEIGHT
			M3	UG/M3	MG
05/10/89	FC2	18362	1628	37.21	60.6
05/22/89	FC2	18372	1632	49.58	80.9
06/03/89	FC2	18381	1639	11.63	19.05
06/15/89	FC2	18391	1641	37.85	62.1
06/27/89	FC2	18401	1647	34.91	57.5
07/09/89	FC2	18411	1621	32.59	52.85
07/21/89	FC2	18421	1623	89.01	144.5
08/14/89	FC2	18435	1622	40.1	65.05
08/26/89	FC2	22707	1636	43.82	71.7
09/07/89	FC2	22718	1633	66.67	108.85
09/19/89	FC2	22725	1633	30.31	49.5

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	TSP NET	
				CONC ug/m <sup>3</sup>	WEIGHT MG
05/10/89	FC2D	18363	1647	37.99	62.55
05/22/89	FC2D	18373	1635	49.97	81.7
06/03/89	FC2D	18389	1637	12.89	21.1
06/15/89	FC2D	18392	1634	39.31	64.25
06/27/89	FC2D	18402	1653	37.3	61.65
07/09/89	FC2D	18412	1663	36.71	61.05
07/21/89	FC2D	18422	1665	96.35	160.45
08/14/89	FC2D	18436	1660	39.68	65.85
08/26/89	FC2D	22708	1609	45.45	73.1
09/07/89	FC2D	22719	1617	69.72	112.7
09/19/89	FC2D	22726	1611	29.87	48.1

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	TSP NET	
				CONC ug/m <sup>3</sup>	WEIGHT MG
05/10/89	BF3	18365	1605	36.72	58.95
05/22/89	BF3	18375	1601	48.06	76.95
06/03/89	BF3	18383	1627	21.48	34.95
06/15/89	BF3	18393	1348	49.56	66.8
06/27/89	FC3	18403	1665	37.51	62.45
07/09/89	FC3	18413	1658	37.06	61.45
07/21/89	FC3	18423	1659	93.71	155.45
08/14/89	FC3	18437	1403	51.35	72.05
08/26/89	FC3	22709	1618	44.05	71.25
09/07/89	FC3	22720	1616	68.68	111
09/19/89	FC3	22727	1694	28.42	48.15

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	TSP NET	
				CONC ug/m <sup>3</sup>	WEIGHT kg
05/10/89	BF4	18366	1456	41.54	60.5
05/22/89	BF4	18376	1451	51.15	74.25
06/03/89	BF4	18384	1455	13.23	19.25
06/15/89	FC4	18394	1674	40.34	67.55
06/27/89	FC4	18404	1686	38.71	65.25
07/09/89	FC4	18414	1682	37.48	63.05
07/21/89	FC4	18424	1684	103.39	174.15
08/02/89	FC4	18431	1171	39.52	46.3
08/14/89	FC4	18438	1683	40.88	68.8
08/26/89	FC4	22710	1667	47.16	78.6
09/07/89	FC4	22721	1662	70.23	116.75
09/19/89	FC4	22728	1646	30.66	50.45

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	TSP NET	
				CONC ug/m <sup>3</sup>	WEIGHT NG
06/15/89	FC5	18395	1681	46.3	77.85
06/27/89	FC5	18405	1683	45.91	77.25
07/09/89	FC5	18415	1681	47.61	80.05
07/21/89	FC5	18425	1669	87.08	145.3
08/14/89	FC5	18439	1683	51.41	86.5
08/26/89	FC5	22711	1639	68.34	112
09/07/89	FC5	22722	1638	76.18	124.8
09/19/89	FC5	22729	1637	31.21	51.1

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	TSP CONC	NET WEIGHT
				ug/m <sup>3</sup>	mg
05/10/89	BF5	18367	1617	36.24	58.6
05/22/89	BF5	18377	1617	45.58	73.7
06/03/89	BF5	18385	1618	10.85	17.55
06/15/89	BF5	18396	1672	36.58	61.15
06/27/89	BF5	18406	1674	43.55	72.9

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	TSP CONC	NET WEIGHT
				ug/m <sup>3</sup>	MG
05/10/89	BF7	18368	1676	36.54	61.25
05/22/89	BF7	18378	1671	44.53	74.4
06/03/89	BF7	18386	1680	12.59	21.15
06/15/89	BF7	18397	1676	39.35	65.95
06/27/89	BF7	18407	1674	38.88	65.1

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m3)

DATE	SITE	TAG NO.	VOLUME M3	TSP	NET
				CONC UG/M3	WEIGHT MG
05/10/89	RIFS1	18369	1612	50.23	80.95
05/22/89	RIFS1	18379	1588	51.81	82.3
06/03/89	RIFS1	18387	1622	12.11	19.65
06/15/89	RIFS1	18398	1602	40.69	65.2
06/27/89	RIFS1	18408	1587	42.05	66.75

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	TSP CONC ug/m <sup>3</sup>	NET WEIGHT M <sup>6</sup>
06/03/89	FC2F	18388			0.2
06/15/89	FC2F	18399			0.15
06/27/89	FC2F	18409			0
07/09/89	FC2F	18416			-0.45
07/21/89	FC2F	18426			0
08/02/89	FC2F	18433			
08/14/89	FC2F	18440			0.35
08/26/89	FC2F	22712			-0.5
09/07/89	FC2F	22723			0.75
09/19/89	FC2F	22730			0.1

**APPENDIX P**  
**IRA-F Respirable Particulates of Less Than 10 Microns (PM-10) Data**

RESPIRABLE PARTICULATES OF LESS THAN 10 MICRONS (PM-10) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	NET	
				CONC ug/m <sup>3</sup>	WEIGHT MG
06/27/89	FC1	21901	1583	17.53	27.75
07/21/89	FC1	21905	1586	34.8	55.2
08/14/89	FC1				
08/26/89	FC1	21915	1369	18.45	25.25
09/07/89	FC1	21917	1898	26.53	50.35
09/19/89	FC1	21919	1369	16.43	22.5

RESPIRABLE PARTICULATES OF LESS THAN 10 MICRONS (PM-10) DATA  
(IN UG/M3)

DATE	SITE	TAG NO.	VOLUME M3	NET	
				CONC UG/M3	WEIGHT M6
06/27/89	FC3	21902	1366	16.26	22.2
07/09/89	FC3	21904	1360	17.13	23.3
07/21/89	FC3	21906	1360	35.65	48.5
08/14/89	FC3	21909	1369	17.79	24.35
08/26/89	FC3	21916	1412	18.49	26.1
09/07/89	FC3	21918	1408	30.64	43.15
09/19/89	FC3	21920	1406	15.29	21.5

**APPENDIX Q**  
**IRA-F Arsenic, Metals, and Mercury Data**

## SUMMARY OF ARSENIC AND METALS

IRAF

ALL UNITS ARE IN UG/M3

FIELD SAMPLE DATE	SAMPLE NUMBER	SITE ID	ARSENIC RESULTS	CADMIUM RESULTS	CHROMIUM RESULTS	COPPER RESULTS	LEAD RESULTS	ZINC RESULTS
05/10/89	18361	FC1	0.0006	0.0004	LT 0.0051	0.0772	0.0489	0.0213
05/10/89	18362	FC2	0.0005	LT 0.0004	LT 0.0051	0.0269	0.0493	0.0183
05/10/89	18363	FC2D	0.0005	0.0004	LT 0.0051	0.1180	0.0502	0.0210
05/10/89	18365	BF3	0.0006	LT 0.0004	LT 0.0051	0.1200	0.0675	0.0216
05/10/89	18366	BF4	0.0005	LT 0.0004	LT 0.0051	0.1330	0.0682	0.0218
05/10/89	18367	BF5	0.0005	LT 0.0004	LT 0.0051	0.0736	0.0471	0.0218
05/10/89	18368	BF7	0.0006	0.0006	LT 0.0051	0.1530	0.0411	0.0216
05/10/89	18369	RIFS1	0.0005	0.0005	LT 0.0051	0.2360	0.0601	0.0319
05/22/89	18371	FC1	0.0006	0.0033	LT 0.0051	0.1910	0.0137	0.0272
05/22/89	18372	FC2	0.0006	0.0043	LT 0.0051	0.1610	0.0268	0.0268
05/22/89	18373	FC2D	0.0004	0.0029	LT 0.0051	0.2290	0.0176	0.0280
05/22/89	18375	BF3	0.0005	0.0033	LT 0.0051	0.1370	0.0179	0.0275
05/22/89	18376	BF4	0.0005	0.0040	LT 0.0051	0.1330	0.0208	0.0296
05/22/89	18377	BF5	0.0005	0.0021	LT 0.0051	0.1180	0.0173	0.0233
05/22/89	18378	BF7	0.0006	0.0013	LT 0.0051	0.1940	0.0136	0.0285
05/22/89	18379	RIFS1	0.0006	0.0021	LT 0.0051	0.1030	0.0219	0.0409
06/3/89	18381	FC2	LT 0.0004	LT 0.0004	LT 0.0051	0.0659	LT 0.0050	0.0094
06/3/89	18383	BF3	LT 0.0004	LT 0.0004	LT 0.0051	0.0922	LT 0.0050	0.0076
06/3/89	18384	BF4	LT 0.0004	LT 0.0004	LT 0.0051	0.0838	LT 0.0050	0.0069
06/3/89	18385	BF5	LT 0.0004	LT 0.0004	LT 0.0051	0.0643	LT 0.0050	0.0393
06/3/89	18386	BF7	LT 0.0004	LT 0.0004	LT 0.0051	0.1150	LT 0.0050	0.0062
06/3/89	18387	RIFS1	LT 0.0004	LT 0.0004	LT 0.0051	0.0611	LT 0.0050	0.0105
06/3/89	18389	FC2D	LT 0.0004	LT 0.0004	LT 0.0051	0.0770	LT 0.0050	0.0095
06/15/89	18391	FC2	LT 0.0004	0.0011	LT 0.0051	0.1220	0.0110	0.0134
06/15/89	18392	FC2D	LT 0.0004	0.0010	LT 0.0051	0.1920	0.0091	0.0186
06/15/89	18393	BF3	LT 0.0004	0.0009	LT 0.0051	0.1420	0.0153	0.0280
06/15/89	18394	FC4	LT 0.0004	0.0007	LT 0.0051	0.1310	0.0109	0.0098
06/15/89	18395	FC5	LT 0.0004	0.0007	LT 0.0051	0.1640	0.0095	0.0196
06/15/89	18396	BF5	LT 0.0004	0.0004	LT 0.0051	0.1750	0.0082	0.0178
06/15/89	18397	BF7	LT 0.0004	0.0006	LT 0.0051	0.1770	0.0113	0.0216
06/15/89	18398	RIFS1	LT 0.0004	0.0004	LT 0.0051	0.1640	0.0115	0.0218
06/27/89	18401	FC2	LT 0.0004	LT 0.0004	LT 0.0051	0.0953	0.0119	0.0185
06/27/89	18402	FC2D	LT 0.0004	LT 0.0004	LT 0.0051	0.1e90	0.0140	0.0185
06/27/89	18403	FC3	LT 0.0004	LT 0.0004	LT 0.0051	0.0323	0.0126	0.0234
06/27/89	18404	FC4	0.0004	LT 0.0004	LT 0.0051	0.1080	0.0142	0.0255
06/27/89	18405	FC5	0.0004	LT 0.0004	LT 0.0051	0.2160	0.0141	0.0292
06/27/89	18406	BF5	LT 0.0004	LT 0.0004	LT 0.0051	0.1430	0.0130	0.0228
06/27/89	18407	BF7	LT 0.0004	LT 0.0004	LT 0.0051	0.0938	0.0137	0.0205
06/27/89	18408	RIFS1	LT 0.0004	LT 0.0004	LT 0.0051	0.1170	0.0156	0.0465
07/9/89	18411	FC2	LT 0.0004	LT 0.0004	LT 0.0051	0.1520	0.0067	0.0200
07/9/89	18412	FC2D	LT 0.0004	LT 0.0004	LT 0.0051	GT 0.3070	LT 0.0050	0.0232
07/9/89	18413	FC3	0.0004	LT 0.0004	LT 0.0051	0.1210	0.0053	0.0127
07/9/89	18414	FC4	0.0004	LT 0.0004	LT 0.0051	0.1490	0.0071	0.0178
07/9/89	18415	FC5	LT 0.0004	LT 0.0004	LT 0.0051	0.2090	0.0064	0.0350
07/21/89	18421	FC2	0.0005	LT 0.0004	LT 0.0051	0.0746	0.0050	0.0140
07/21/89	18422	FC2D	0.0004	LT 0.0004	LT 0.0051	0.1150	0.0089	0.0178
07/21/89	18423	FC3	0.0004	LT 0.0004	LT 0.0051	0.0675	0.0069	0.0204
07/21/89	18424	FC4	0.0005	LT 0.0004	LT 0.0051	0.0588	0.0085	0.0179
07/21/89	18425	FC5	LT 0.0004	LT 0.0004	LT 0.0051	0.0983	0.0091	0.0272
08/14/89	18434	FC1	LT 0.0004	LT 0.0004	LT 0.0051	0.1620	0.0090	0.0165
08/14/89	18435	FC2	LT 0.0004	LT 0.0004	LT 0.0051	0.0709	0.0083	0.0213

EBASCO SERVICES INCORPORATED

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF ARSENIC AND METALS

IRAF

ALL UNITS ARE IN ug/m<sup>3</sup>

FIELD									
SAMPLE DATE	SAMPLE NUMBER	SITE ID	ARSENIC RESULTS	CADMIUM RESULTS	CHROMIUM RESULTS	COPPER RESULTS	LEAD RESULTS	ZINC RESULTS	
08/16/89	18636	FC2D	LT 0.0004	LT 0.0004	LT 0.0051	0.0563	0.0068	0.0196	
08/16/89	18637	FC3	LT 0.0004	LT 0.0004	LT 0.0051	0.1030	0.0095	0.0217	
08/16/89	18638	FC4	LT 0.0004	LT 0.0004	LT 0.0051	0.0796	0.0063	0.0168	
08/16/89	18639	FC5	LT 0.0004	LT 0.0004	LT 0.0051	0.0707	0.0071	0.0176	

## SUMMARY OF MERCURY FOR IMAF

ALL UNITS ARE IN UG/M3

SAMPLE DATE	SAMPLE NUMBER	FIELD SITE ID	MERCURY RESULTS
05/10/89	20157	FC1	LT 0.6180
05/10/89	20160	FC2	LT 0.6180
05/10/89	20163	FC2D	LT 0.6180
05/10/89	20169	BF3	LT 0.6180
05/10/89	20172	BF6	LT 0.6180
05/10/89	20175	BF5	LT 0.6180
05/10/89	20178	BF7	LT 0.6180
05/10/89	20181	RIFS1	LT 0.6180
05/16/89	23001	FC1	LT 0.6180
05/16/89	23004	FC2	LT 0.6180
05/16/89	23007	BF3	LT 0.6180
05/16/89	23010	BF4	LT 0.6180
05/16/89	23013	BF5	LT 0.6180
05/16/89	23016	BF7	LT 0.6180
05/16/89	23019	RIFS1	LT 0.6180
05/22/89	23025	FC1	LT 0.6180
05/22/89	23028	FC2	LT 0.6180
05/22/89	23031	FC2D	LT 0.6180
05/22/89	23037	BF3	LT 0.6180
05/22/89	23040	BF4	LT 0.6180
05/22/89	23043	BF5	LT 0.6180
05/22/89	23046	BF7	LT 0.6180
05/22/89	23049	RIFS1	LT 0.6180
05/28/89	23052	FC1	LT 0.6180
05/28/89	23055	FC2	LT 0.6180
05/28/89	23058	BF3	LT 0.6180
05/28/89	23061	BF4	LT 0.6180
05/28/89	23064	BF5	LT 0.6180
05/28/89	23067	BF7	LT 0.6180
05/29/89	23070	RIFS1	LT 0.6180
06/3/89	23079	FC2	LT 0.6180
06/3/89	23082	FC2D	LT 0.6180
06/3/89	23085	BF3	LT 0.6180
06/3/89	23088	BF4	LT 0.6180
06/3/89	23091	BF5	LT 0.6180
06/3/89	23094	BF7	LT 0.6180
06/3/89	23097	RIFS1	LT 0.6180
06/9/89	23103	FC1	LT 0.6180
06/9/89	23106	FC2	LT 0.6180
06/9/89	23109	BF3	LT 0.6180
06/9/89	23112	BF4	LT 0.6180
06/9/89	23115	BF5	LT 0.6180
06/9/89	23118	BF7	LT 0.6180
06/9/89	23121	RIFS1	LT 0.6180
06/15/89	23127	FC2	LT 0.6180
06/15/89	23130	FC2D	LT 0.6180
06/15/89	23133	BF3	LT 0.6180
06/15/89	23136	BF4	LT 0.6180
06/15/89	23139	FC5	LT 0.6180
06/15/89	23142	BF5	LT 0.6180
06/15/89	23145	BF7	LT 0.6180

## SUMMARY OF MERCURY FOR IRAF

ALL UNITS ARE IN UG/M3

AMPLE DATE	SAMPLE NUMBER	FIELD SITE ID	MERCURY RESULTS
6/15/89	23148	RIFS1	LT 0.6180
6/21/89	23154	FC1	LT 0.6180
6/21/89	23157	FC2	LT 0.6180
6/21/89	23160	BF3	LT 0.6180
6/21/89	23163	FC4	LT 0.6180
6/21/89	23166	FC5	LT 0.6180
6/21/89	23169	BF5	LT 0.6180
6/21/89	23172	BF7	LT 0.6180
6/21/89	23175	RIFS1	LT 0.6180
6/27/89	23181	FC1	LT 0.6180
6/27/89	23184	FC2	LT 0.6180
6/27/89	23187	FC2D	LT 0.6180
6/27/89	23190	FC3	LT 0.6180
6/27/89	23193	FC4	LT 0.6180
6/27/89	23196	FC5	LT 0.6180
6/27/89	23199	BF5	LT 0.6180
6/27/89	23202	BF7	LT 0.6180
6/27/89	23205	RIFS1	LT 0.6180
6/7/89	23223	FC2	LT 0.6180
6/7/89	23226	FC2D	LT 0.6180
6/7/89	23229	FC3	LT 0.6180
6/7/89	23232	FC4	LT 0.6180
6/7/89	23235	FC5	LT 0.6180
6/21/89	23253	FC1	LT 0.6200
6/21/89	23256	FC2	LT 0.6200
6/21/89	23259	FC2D	LT 0.6200
6/21/89	23262	FC3	LT 0.6200
6/21/89	23265	FC4	LT 0.6200
6/21/89	23268	FC5	LT 0.6200
6/14/89	23301	FC1	LT 0.6180
6/14/89	23304	FC2	LT 0.6180
6/14/89	23307	FC2D	LT 0.6180
6/14/89	23310	FC3	LT 0.6180
6/14/89	23313	FC4	LT 0.6180
6/14/89	23316	FC5	LT 0.6180
6/26/89	23330	FC1	LT 0.6180
6/26/89	23331	FC2	LT 0.6180
6/26/89	23332	FC2D	LT 0.6180
6/26/89	23333	FC3	LT 0.6180
6/26/89	23336	FC4	LT 0.6180
6/26/89	23335	FC5	LT 0.6180
6/9/89	23363	FC1	LT 0.6180
6/9/89	23366	FC2	LT 0.6180
6/9/89	23369	FC2D	LT 0.6180
6/9/89	23372	FC3	LT 0.6180
6/9/89	23375	FC4	LT 0.6180
6/9/89	23378	FC5	LT 0.6180
6/19/89	23396	FC1	LT 0.6180
6/19/89	23399	FC2	LT 0.6180
6/19/89	23402	FC2D	LT 0.6180
6/19/89	23405	FC3	LT 0.6180

BASCO SERVICES INCORPORATED

ROCKY MOUNTAIN ARSENAL PROGRAM

05/13/80

SUMMARY OF MERCURY FOR IRAF

ALL UNITS ARE IN UG/M3

FIELD			
SAMPLE DATE	SAMPLE NUMBER	SITE ID	MERCURY RESULTS
09/19/89	23608	FC6	LT 0.6180
09/19/89	23611	FC5	LT 0.6180

**APPENDIX R**  
**IRA-F Volatile Organic Compounds (VOC) Data**

## ERASED SERVICES INCORPORATED

ALL UNITS ARE IN US/MS

## SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VALUES ABOVE THE CRL

Date Number	Field Sample Number	Site Id	1,1,1- Trichloroethane	1,1,2- Trichloroethane	1,1,1- Dichloroethane	1,1,2- Dichloroethane	Benzene	Chloroform	Chloroethylene	Carbon Tetrachloride	Methylene Chloride	Methylene Chloride	Tetrahydrofuran	Page 1		
														1.1.1- Trichloroethane	1,1,2- Trichloroethane	
05/10/89	20170	20171	8F3	1.1600	LT 0.0295	LT 0.0243	0.0323	0.2420	LT 0.0417	1.4500	0.4200	0.3120	0.3080	0.0471		
			a	b		b				a	b	b				
05/10/89	20173	20174	8F4	1.5200	LT 0.0295	LT 0.0243	0.0313	LT 0.0278	LT 0.0417	1.9600	0.5080	0.4660	0.3280	LT 0.0470		
			b			b				a	b	b				
05/10/89	20176	20177	8F5	0.9860	LT 0.0295	LT 0.0243	0.0262	0.7750	LT 0.0417	1.6000	0.3900	0.3180	0.1700	0.0417		
			a	b		b										
05/10/89	20179	20180	8F7	2.0000	LT 0.0295	LT 0.0243	LT 0.0208	0.6670	LT 0.0417	2.1000	0.4950	0.7420	0.1620	0.0671		
			a							a	b	a				
05/10/89	20158	20159	FC1	1.0800	LT 0.0295	LT 0.0243	LT 0.0208	0.4800	LT 0.0417	1.5303	0.3060	0.4210	0.2500	0.0222		
			b							a	b	b				
05/16/89	20161	20162	FC2	1.4500	LT 0.0295	LT 0.0243	0.0456	0.7030	LT 0.0417	1.2900	0.4840	0.6230	0.5290	0.0434		
			a													
05/10/89	20165	20165	FC20	1.7700	LT 0.0295	LT 0.0243	0.1030	1.0700	LT 0.0417	2.5500	0.6500	0.5280	0.6390	0.1170		
			a													
05/10/89	20182	20183	RIFS1	2.1400	LT 0.0295	LT 0.0243	LT 0.0208	1.1200	LT 0.0417	2.5700	0.5540	0.9210	0.1980	0.0464		
			b							a	b	b				
05/16/89	23009	23009	8F3	1.7300	LT 0.0295	LT 0.0243	LT 0.0208	1.1190	LT 0.0417	1.1600	0.4270	1.6600	0.0802	LT 0.0474		
			a													
05/16/89	23011	23012	8F4	2.1600	LT 0.0295	LT 0.0243	LT 0.0208	1.3000	LT 0.0417	1.4900	0.6520	2.6100	0.1050	LT 0.0424		
			a													
05/16/89	23017	23018	8F7	1.3500	LT 0.0295	LT 0.0243	LT 0.0208	0.7330	LT 0.0417	0.3630	0.4210	0.6990	0.0759	LT 0.0416		
			a													
05/16/89	23002	23003	FC1	1.7900	LT 0.0295	LT 0.0243	0.0255	0.5530	LT 0.0417	1.2260	0.4710	1.1700	0.0918	LT 0.0470		
			a													
05/16/89	23020	23021	RIFS1	1.5700	LT 0.0295	LT 0.0243	0.0235	1.0500	LT 0.0417	0.9940	0.1230	0.2970	0.0600	LT 0.0430		
			a			b										
05/22/89	23038	23039	8F3	0.8640	LT 0.0295	LT 0.0243	LT 0.0208	0.7910	LT 0.0417	1.4000	0.2410	0.4050	0.0700	LT 0.0434		
			b													
05/22/89	23048	23048	8F7	1.0600	LT 0.0295	LT 0.0243	LT 0.0208	0.6230	LT 0.0417	1.2300	0.2900	0.4370	0.0520	LT 0.0430		
			a													
05/22/89	23026	23027	FC1	0.9230	LT 0.0295	LT 0.0243	LT 0.0208	0.7720	LT 0.0417	1.1200	0.2645	0.2140	0.0517	LT 0.0416		
			a													
05/22/89	23031	23031	FC20	1.2400	LT 0.0295	LT 0.0243	LT 0.0208	0.1140	LT 0.0417	1.1600	0.3410	0.1910	0.0454	LT 0.0415		
			a													

a - t/c weight 1.251 weight

b - Detected on t/c only

b1 - Value is Above CRL; No Estimate Available





## ERASCO SERVICES INCORPORATED

## ROCKY MOUNTAIN ARSENAL PROGRAM

ALL UNITS ARE IN US/R3

SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VOLATILES ABOVE THE CRL

Sample Field Sample Site Id Dibromochloropropane Di(cyclopentadiene) Ethylbenzene Ethylbenzene Sulfide

Date Number M-Nitroso-  
Ketone

05/22/89 23059 23051 RIFS1 LT 0.0382 LT 0.0451 LT 0.0469 0.5190 2.3700 LT 0.0174 LT 0.1020 LT 0.0399 0.7040 LT 0.0330 1.9600

05/28/89 23060 8F3 LT 0.0382 LT 0.0451 LT 0.0469 0.5380 2.7500 LT 0.0174 LT 0.1020 LT 0.0399 0.6500 LT 0.0330 2.0100

05/28/89 23062 23063 8F4 LT 0.0382 LT 0.0451 LT 0.0469 0.7120 3.3100 LT 0.0174 LT 0.1020 LT 0.0399 0.5340 LT 0.0330 1.8200

05/28/89 23065 23066 8F5 LT 0.0382 LT 0.0451 LT 0.0469 0.7460 3.2500 LT 0.0174 LT 0.1020 LT 0.0399 0.5220 LT 0.0330 1.6100

05/28/89 23053 23054 FC1 LT 0.0382 LT 0.0451 LT 0.0469 0.6620 3.2400 LT 0.0174 LT 0.1020 LT 0.0399 0.5230 0.1320 2.2600

05/28/89 23056 23057 FC2 LT 0.0382 LT 0.0451 LT 0.0469 0.9900 2.5200 LT 0.0174 LT 0.1020 LT 0.0399 0.4200 0.0201 1.2500

05/28/89 23071 23072 RIFS1 LT 0.0382 LT 0.0451 LT 0.0469 0.7980 3.5400 LT 0.0174 LT 0.1020 LT 0.0399 0.6450 LT 0.0330 1.6500

06/3/89 23067 23068 8F3 LT 0.0382 LT 0.0451 LT 0.0469 0.1030 0.7850 LT 0.0174 LT 0.1020 LT 0.0399 0.2390 0.1320 0.3100

06/3/89 23092 23093 8F5 LT 0.0382 LT 0.0451 LT 0.0469 0.0634 0.4400 LT 0.0174 LT 0.1020 LT 0.0399 0.1770 LT 0.0330 0.1130

06/3/89 23095 23096 8F7 LT 0.0382 LT 0.0451 LT 0.0469 0.0961 0.8210 LT 0.0174 LT 0.1020 LT 0.0399 0.1980 LT 0.0330 0.3560

06/3/89 23080 23081 FC2 LT 0.0382 LT 0.0451 LT 0.0469 0.0749 0.6430 LT 0.0174 LT 0.1020 LT 0.0399 0.1720 LT 0.0330 0.2260

06/3/89 23083 23084 FC2D LT 0.0382 LT 0.0451 LT 0.0469 0.0862 0.7130 LT 0.0174 LT 0.1020 LT 0.0399 0.1620 LT 0.0330 1.5160

06/3/89 23098 23099 RIFS1 LT 0.0382 LT 0.0451 LT 0.0469 0.1150 0.8960 LT 0.0174 LT 0.1020 LT 0.0399 0.1910 LT 0.0330 0.7850

06/9/89 23110 23111 8F3 LT 0.0382 LT 0.0451 LT 0.0469 0.2910 1.4200 LT 0.0174 LT 0.1020 LT 0.0399 0.3170 LT 0.0330 1.0600

06/9/89 23113 23114 8F4 LT 0.0382 LT 0.0451 LT 0.0469 0.3600 1.4300 LT 0.0174 LT 0.1020 LT 0.0399 0.3360 LT 0.0330 1.1150

06/9/89 23116 23117 8F5 LT 0.0382 LT 0.0451 LT 0.0469 0.2550 1.3300 LT 0.0174 LT 0.1020 LT 0.0399 0.3010 LT 0.0330 0.4650

06/9/89 23119 23120 8F7 LT 0.0382 LT 0.0451 LT 0.0469 0.2500 1.5700 0.0332 LT 0.1020 LT 0.0399 0.3500 LT 0.0330 0.4400

a - t/c weight 1.25t weight

b - Detected on t/c only

c - Value is Above CRL; No Estimate Available

d - t/c weight 1.25t weight

e - Detected on t/c only

f - Value is Above CRL; No Estimate Available

g - t/c weight 1.25t weight

h - Detected on t/c only

i - Value is Above CRL; No Estimate Available

j - t/c weight 1.25t weight

k - Detected on t/c only

l - Value is Above CRL; No Estimate Available

m - t/c weight 1.25t weight

n - Detected on t/c only

o - Value is Above CRL; No Estimate Available

p - t/c weight 1.25t weight

q - Detected on t/c only

r - Value is Above CRL; No Estimate Available

s - t/c weight 1.25t weight

t - Detected on t/c only

u - Value is Above CRL; No Estimate Available

v - t/c weight 1.25t weight

w - Detected on t/c only

x - Value is Above CRL; No Estimate Available

y - t/c weight 1.25t weight

z - Detected on t/c only

aa - Value is Above CRL; No Estimate Available

bb - t/c weight 1.25t weight

cc - Detected on t/c only

dd - Value is Above CRL; No Estimate Available

ee - t/c weight 1.25t weight

ff - Detected on t/c only

gg - Value is Above CRL; No Estimate Available

hh - t/c weight 1.25t weight

ii - Detected on t/c only

jj - Value is Above CRL; No Estimate Available

kk - t/c weight 1.25t weight

ll - Detected on t/c only

mm - Value is Above CRL; No Estimate Available

nn - t/c weight 1.25t weight

oo - Detected on t/c only

pp - Value is Above CRL; No Estimate Available



## FRASCO SERVICES INCORPORATED

## ROCKY MOUNTAIN ARSENAL PROGRAM

ALL UNITS ARE IN US/IN<sup>3</sup>

SUMMARY OF VOLATILE ORGANIC COMPOUNDS, INCLUDES ESTIMATED VALUES ABOVE THE CRITICAL LEVELS FOR WHICH AN ASSESSMENT IS BEING MADE  
 Sample Field Sample Site id. Date Number

Sample	Field Sample	Site id.	Date	Number	Diethyldisulfide	Dicyclopentadiene	Ethybenzene	Toluene	<i>N,N</i> -Ditertiarybutylbenzene	<i>N</i> -Nitroso-	Trans-1,	Tetrahydroethene Tri-1,1-nitro-1,1- Etoe	diethylamine	2-Dichloroethane	para-Xylene
06/19/89	23107	23108	FC2	LT 0.0382	LT 0.0451	LT 0.0469	0.2730	1.3730	LT 0.0174	LT 0.1020	LT 0.0399	0.3460	LT 0.0330	0.3450	LT 0.0300
06/19/89	23122	23123	RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	0.3500	1.6400	LT 0.0174	LT 0.1020	LT 0.0399	0.3670	LT 0.0330	1.3400	LT 0.0330
06/15/89	23134	23135	8F3	LT 0.0382	LT 0.0451	LT 0.0469	0.4350	1.5400	LT 0.0174	LT 0.1020	LT 0.0399	0.4720	LT 0.0330	1.2400	LT 0.0330
06/15/89	23137	23138	8F4	LT 0.0382	LT 0.0451	LT 0.0469	0.4120	0.3470	LT 0.0174	LT 0.1020	LT 0.0399	0.4050	LT 0.0330	1.2900	LT 0.0330
06/15/89	23143	23144	8F5	LT 0.0382	LT 0.0451	LT 0.0469	0.3450	1.5000	LT 0.0174	LT 0.1020	LT 0.0399	0.4250	LT 0.0330	1.1400	LT 0.0330
06/15/89	23146	23147	8F7	0.0626	LT 0.0451	LT 0.0469	0.4620	0.3470	LT 0.0174	LT 0.1020	LT 0.0399	0.4160	LT 0.0330	1.0500	LT 0.0330
06/15/89	23129	23129	FC2	LT 0.0382	LT 0.0451	LT 0.0469	0.3460	1.5600	LT 0.0174	LT 0.1020	LT 0.0399	0.4870	LT 0.0330	1.0600	LT 0.0330
06/15/89	23131	23132	FC20	LT 0.0382	LT 0.0451	LT 0.0469	0.3240	2.6000	LT 0.0174	LT 0.1020	LT 0.0399	0.4260	LT 0.0330	1.0600	LT 0.0330
06/15/89	23140	23141	FC5	LT 0.0382	LT 0.0451	LT 0.0469	0.3220	1.4900	LT 0.0174	LT 0.1020	LT 0.0399	0.4170	LT 0.0330	0.4500	LT 0.0330
06/15/89	23149	23150	RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	0.3560	1.5600	LT 0.0174	LT 0.1020	LT 0.0399	0.3740	LT 0.0330	1.1420	LT 0.0330
06/21/89	23161	23162	8F3	LT 0.0382	LT 0.0451	LT 0.0469	0.0751	0.5580	LT 0.0174	LT 0.1020	LT 0.0399	0.2640	LT 0.0330	0.3420	LT 0.0330
06/21/89	23170	23171	8F5	LT 0.0382	LT 0.0451	LT 0.0469	0.0462	0.6240	LT 0.0174	LT 0.1020	LT 0.0399	0.1960	LT 0.0330	0.1350	LT 0.0330
06/21/89	23155	23156	FC1	LT 0.0382	LT 0.0451	LT 0.0469	0.3050	1.6500	LT 0.0174	LT 0.1020	LT 0.0399	0.3970	LT 0.0330	1.2350	LT 0.0330
06/21/89	23158	23159	FC2	LT 0.0382	LT 0.0451	LT 0.0469	0.0925	1.9600	LT 0.0174	LT 0.1020	LT 0.0399	0.3550	LT 0.0330	0.3110	LT 0.0330
06/21/89	23164	23165	FC4	LT 0.0382	LT 0.0451	LT 0.0469	0.3160	1.3300	LT 0.0174	LT 0.1020	LT 0.0399	0.4240	LT 0.0330	1.1900	LT 0.0330
06/21/89	23166	23167	FC5	LT 0.0382	LT 0.0451	LT 0.0469	0.0947	0.6510	LT 0.0174	LT 0.1020	LT 0.0399	0.4610	LT 0.0330	0.3420	LT 0.0330
06/21/89	23176	23177	RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	0.1360	1.2500	LT 0.0174	LT 0.1020	LT 0.0399	0.3250	LT 0.0330	0.3740	LT 0.0330

d = t/c weight 1/25t weight

b = Detected on t/c only

b1 - Value is Above CR; No Estimate Available

## ERASCO SERVICES INCORPORATED

## ROCKY MOUNTAIN ARSENAL PIGEON

ALL UNITS ARE IN ug/m<sup>3</sup>

SUMMARY OF VOLATILE ORGANIC COMPOUNDS (INCLUDES ESTIMATED VALUES ABOVE THE CRL)

Sample Field Sample Site id 1.1.1. Date Number Trichloroethane 1,1,2-

1,1,2-Trichloroethane Dichloroethane Diethylbenzene Bis(2-Ethylhexyl) Phthalate Chloroform Chloroacetic

06/27/89 23200 23201	BF1	0.2900	LT 0.0295	LT 0.0243	LT 0.0208	0.8030	LT 0.0417	LT 0.010	0.4420	0.0787	LT 0.0130
06/27/89 23204 23206	BF7	0.9450	LT 0.0295	LT 0.0243	LT 0.0208	0.2710	LT 0.0417	LT 0.0330	0.6330	LT 0.0208	LT 0.0130
06/27/89 23182 23183	FC1	0.9280	LT 0.0295	LT 0.0243	LT 0.0208	0.6550	LT 0.0417	LT 0.0330	0.0570	0.0653	LT 0.0330
06/27/89 23185 23186	FC2	0.9020	LT 0.0295	LT 0.0243	LT 0.0208	0.6340	LT 0.0417	LT 0.0330	0.0400	0.0970	LT 0.0130
06/27/89 23188 23189	FC20	1.6400	LT 0.0295	LT 0.0243	LT 0.0208	0.7550	LT 0.0417	LT 0.0330	1.5100	0.5600	LT 0.0278
06/27/89 23191 23192	FC3	1.0200	LT 0.0295	LT 0.0243	LT 0.0208	0.6360	LT 0.0417	LT 0.0330	1.0300	0.2390	0.4560
06/27/89 23194 23195	FC4	0.9210	LT 0.0295	LT 0.0243	LT 0.0208	0.7090	LT 0.0417	LT 0.0330	1.0000	0.2110	0.6610
06/27/89 23197 23198	FC5	0.3920	LT 0.0295	LT 0.0243	LT 0.0208	0.7270	LT 0.0417	LT 0.0330	0.9520	0.2090	0.4470
06/27/89 23206 23207	PF51	1.0600	LT 0.0295	LT 0.0243	LT 0.0208	0.6940	LT 0.0417	LT 0.0330	1.9000	0.2600	0.5360
07/3/89 23213 23214	FC2	1.0700	LT 0.0295	LT 0.0243	LT 0.0208	0.5900	LT 0.0417	LT 0.0330	1.2900	0.4460	0.8210
07/3/89 23217 23218	FC4	0.5250	LT 0.0295	LT 0.0243	LT 0.0208	0.4760	LT 0.0417	LT 0.0330	0.5620	0.1460	0.5940
07/3/89 23219 23220	FC5	0.5630	LT 0.0295	LT 0.0243	LT 0.0208	0.5650	LT 0.0417	LT 0.0330	0.5000	0.1770	0.5990
07/9/89 23224 23225	FC2	0.3930	LT 0.0295	LT 0.0243	LT 0.0208	0.4200	LT 0.0417	LT 0.0330	0.4530	0.1370	0.4260
07/9/89 23227 23228	FC20	0.3960	LT 0.0295	LT 0.0243	LT 0.0208	0.3550	LT 0.0417	LT 0.0330	0.3830	0.0917	0.3580
07/9/89 23230 23231	FC3	0.4190	LT 0.0295	LT 0.0243	LT 0.0208	0.5200	LT 0.0417	LT 0.0330	0.3460	0.1690	0.3730
07/9/89 23233 23234	FC4	0.4160	LT 0.0295	LT 0.0243	LT 0.0208	0.4290	LT 0.0417	LT 0.0330	0.3120	0.1460	0.3820
07/9/89 23236 23237	FC5	0.4030	LT 0.0295	LT 0.0243	LT 0.0208	0.3900	LT 0.0417	LT 0.0330	0.4370	0.1650	0.3860

a - t/c weight

b - Detected on t/c only

61 - Value Is Above CRL; No Estimate Available

## ALL UNITS ARE IN USE/RS

Sample Field Sample Site 16 Diisobutylbenzene  
Date Number

06/27/89 23200 23201 8F5 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469

06/27/89 23203 23206 8F7 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

06/27/89 23182 23183 FC1 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

06/27/89 23185 23186 FC2 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

06/27/89 23188 23189 FC2C LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

06/27/89 23191 23192 FC3 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

06/27/89 23194 23195 FC4 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

06/27/89 23197 23198 FC5 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

06/27/89 23206 23207 RTFS1 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

07/3/89 23213 23216 FC2 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

07/3/89 23217 23218 FC4 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

07/3/89 23219 23220 FC5 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

07/9/89 23224 23225 FC2 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

07/9/89 23227 23228 FC2D LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

07/9/89 23230 23231 FC3 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

07/9/89 23233 23234 FC4 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

07/9/89 23236 23237 FC5 LT 0.0382 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0451 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469 LT 0.0469

a = t/c weight 1.25 weight  
b = Detected on tlc only  
GT = Value is above CRL; No Estimate Available

Page 8

Summary of Volatile Organic Compounds Includes Estimated Values Above the CRL

Methyl Isobutyl Ketone      Trichloroethene      Tetrachloroethene      Trichloroethylene      Methyl Isobutyl Ketone      diethylamine      2-Dichloroethene

0.1400 b      0.1700 b      0.6910 b      0.0399 b      1.1200 b      0.1400 b      0.1700 b

0.1310 b      0.1310 b      0.1360 b      0.1360 b      0.1360 b      0.1360 b      0.1360 b

0.1300 b      0.1300 b      0.1399 b      0.1399 b      0.1399 b      0.1399 b      0.1399 b

0.1200 b      0.1200 b      0.1200 b      0.1200 b      0.1200 b      0.1200 b      0.1200 b

0.1100 b      0.1100 b      0.1100 b      0.1100 b      0.1100 b      0.1100 b      0.1100 b

0.1000 b      0.1000 b      0.1000 b      0.1000 b      0.1000 b      0.1000 b      0.1000 b

0.0900 b      0.0900 b      0.0900 b      0.0900 b      0.0900 b      0.0900 b      0.0900 b

0.0800 b      0.0800 b      0.0800 b      0.0800 b      0.0800 b      0.0800 b      0.0800 b

0.0700 b      0.0700 b      0.0700 b      0.0700 b      0.0700 b      0.0700 b      0.0700 b

0.0600 b      0.0600 b      0.0600 b      0.0600 b      0.0600 b      0.0600 b      0.0600 b

0.0500 b      0.0500 b      0.0500 b      0.0500 b      0.0500 b      0.0500 b      0.0500 b

0.0400 b      0.0400 b      0.0400 b      0.0400 b      0.0400 b      0.0400 b      0.0400 b

0.0300 b      0.0300 b      0.0300 b      0.0300 b      0.0300 b      0.0300 b      0.0300 b

0.0200 b      0.0200 b      0.0200 b      0.0200 b      0.0200 b      0.0200 b      0.0200 b

0.0100 b      0.0100 b      0.0100 b      0.0100 b      0.0100 b      0.0100 b      0.0100 b

0.0000 b      0.0000 b      0.0000 b      0.0000 b      0.0000 b      0.0000 b      0.0000 b

## EASCO SERVICES INCORPORATED

## ROCKY MOUNTAIN ARSENAL PROGRAM

ALL UNITS ARE IN  $\mu\text{g}/\text{m}^3$ 

SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VALUES ABOVE THE CRL

Page 4

07/12/74

Sample	Field Sample	Site ID	1,1,1-		1,1,2-		1,2-		1,1-		Carbon		Methylene	
			Trichloroethane	Trichloroethane	Dichloroethane	Dichloroethane	Benzene	Benzene	Tetrachloroethene	Tetrachloroethene	Chloroform	Chloroform	Chloroform	Chloroform
07/15/89 23241	23242	FC1	1.2100	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.4350	LT 0.0417	1.1500	0.6120	2.0500	0.1630	LT 0.0330
07/15/89 23243	23244	FC2	1.3400	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.5300	LT 0.0417	1.3800	0.6810	4.00	0.6240	LT 0.0330
07/15/89 23247	23248	FC3	1.2600	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.5760	LT 0.0417	1.1500	0.6210	4.2400	0.1110	LT 0.0330
07/15/89 23249	23250	FC4	1.5300	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.5320	LT 0.0417	1.4900	0.5900	3.5400	0.1560	LT 0.0330
07/15/89 23251	23252	FC5	1.3600	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.5730	LT 0.0417	1.1500	0.5620	6.7700	0.2370	LT 0.0330
07/21/89 23254	23255	FC1	1.0600	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.1890	LT 0.0417	1.1600	0.3630	0.3560	0.0797	LT 0.0330
07/21/89 23257	23258	FC2	0.7420	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.2220	LT 0.0417	0.7220	0.2430	0.1730	0.1000	LT 0.0330
07/21/89 23260	23261	FC2D	0.7430	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.2730	LT 0.0417	0.6270	0.2660	0.1980	0.1120	LT 0.0330
07/21/89 23263	23264	FC3	0.8770	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.1760	LT 0.0417	0.9160	0.3190	0.2590	0.0346	LT 0.0330
07/21/89 23266	23267	FC4	0.6830	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.0323	LT 0.0417	0.7710	0.2670	0.8480	0.0301	LT 0.0330
07/21/89 23269	23270	FC5	0.7160	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.1250	LT 0.0417	0.7160	0.2740	0.2600	0.0389	LT 0.0330
07/21/89 23274	23275	FC1	1.2360	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.5520	LT 0.0417	0.6250	0.2010	0.4140	0.1650	LT 0.0330
07/21/89 23276	23277	FC2	1.3500	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.0358	LT 0.0417	0.6540	0.2090	0.4120	0.1560	LT 0.0330
07/21/89 23278	23279	FC3	1.2700	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.1110	LT 0.0417	0.8950	0.3080	0.3450	0.1010	LT 0.0330
07/21/89 23280	23281	FC4	1.9800	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.7170	LT 0.0417	0.9670	0.3470	0.3750	0.1110	LT 0.0330
07/21/89 23282	23283	FC5	1.0800	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	0.7720	LT 0.0417	0.5700	0.2110	0.3650	0.1350	LT 0.0330
08/2/89 23287	23288	FC4	1.4300	<sup>a</sup>	LT 0.0295	LT 0.0243	LT 0.0208	1.1600	LT 0.0417	1.1600	1.1600	1.1600	1.1600	LT 0.0330

<sup>a</sup> = t/c weight 1.5% weight

b - Detected on t/c only

GT - Value is Above CRL; No Estimate Available



## EASCO SERVICES INCORPORATED

## ROCKY MOUNTAIN ARSENAL PROGRAM

ALL UNITS ARE IN US/ft<sup>3</sup>

SUMMARY OF VOLATILE ORGANIC COMPOUNDS, INCLUDES ESTIMATED VALUES ABOVE THE CRL

Sample	Field Sample	Site id	1,1,1-	1,1,2-	1,2-	Carbon	Heavy Metal						
Date	Number		Trichloroethane	Dichloroethane	Bis(2-methoxyethoxy)benzene	Tetrachloride Chloroform	Chlorobenzene						
08/16/89	23299	F61	1.2200	LT 0.0295	LT 0.0243	LT 0.0203	0.3040	LT 0.0417	1.1800	0.2260	3.4300	0.1820	LT 0.0330
08/16/89	23291	F62	1.1700	LT 0.0295	LT 0.0243	LT 0.0203	0.3190	LT 0.0417	1.2700	0.2430	3.2600	0.1610	LT 0.1330
08/16/89	23293	F63	1.2500	LT 0.0295	LT 0.0243	LT 0.0203	0.7270	LT 0.0417	1.1600	0.2290	3.1500	0.1120	LT 0.0330
08/16/89	23295	F64	1.4000	LT 0.0295	LT 0.0243	LT 0.0203	0.9590	LT 0.0417	1.4400	0.2710	4.0600	0.1520	LT 0.0330
08/16/89	23297	F65	0.9710	LT 0.0295	LT 0.0243	LT 0.0203	0.8570	LT 0.0417	1.1600	0.2260	3.5700	0.2140	LT 0.0330
08/16/89	23302	F61	1.0300	LT 0.0295	LT 0.0243	LT 0.0203	1.3200	LT 0.0417	1.1700	0.2290	0.4500	0.1100	LT 0.0330
08/16/89	23305	F62	1.1100	LT 0.0295	LT 0.0243	LT 0.0203	1.3730	LT 0.0417	1.1600	0.2940	0.2100	0.1420	LT 0.0330
08/16/89	23308	F62	0.9090	LT 0.0295	LT 0.0243	LT 0.0203	1.4500	LT 0.0417	1.2000	0.2400	0.2000	0.2180	LT 0.0330
08/16/89	23311	F63	1.0700	LT 0.0295	LT 0.0243	LT 0.0203	1.3600	LT 0.0417	1.5400	0.2980	0.4000	0.0664	LT 0.0330
08/16/89	23317	F65	0.5730	LT 0.0295	LT 0.0243	LT 0.0203	1.3100	LT 0.0417	1.1600	0.2120	0.3390	0.1170	LT 0.0330
08/20/89	23322	F62	0.7570	LT 0.0295	LT 0.0243	LT 0.0203	0.5300	LT 0.0417	0.9130	0.2490	0.8200	0.4200	LT 0.0330
08/20/89	23325	F64	1.1500	LT 0.0295	LT 0.0243	LT 0.0203	0.7140	LT 0.0417	1.4000	0.3480	1.1200	0.1450	LT 0.0330
08/20/89	23326	F65	0	LT 0.0295	LT 0.0243	LT 0.0203	0.5940	LT 0.0417	1.2200	0.2500	0.9500	0.1330	LT 0.0330
08/26/89	23337	F65	0.9740	LT 0.0295	LT 0.0243	LT 0.0203	0.6160	LT 0.0417	0	0	0	0	0
08/26/89	23338	F61	1.3700	LT 0.0295	LT 0.0243	LT 0.0203	0.5940	LT 0.0417	1.1200	0.2310	0.4550	0.1220	LT 0.0330
08/26/89	23339	F62	1.0200	LT 0.0295	LT 0.0243	LT 0.0203	0.5990	LT 0.0417	1.1000	0.2310	0.5500	0.1750	LT 0.0330
08/26/89	23341	F62	0.3360	LT 0.0295	LT 0.0243	LT 0.0203	0.5020	LT 0.0417	0.2660	0.2550	0.2140	0.1240	LT 0.0330
08/26/89	23342	F63	0	LT 0.0295	LT 0.0243	LT 0.0203	0.4590	LT 0.0417	0	0	0	0	0
08/26/89	23344	F63	1.1600	LT 0.0295	LT 0.0243	LT 0.0203	0.4590	LT 0.0417	1.1030	0	0	0	0

a - t/c weight 1.25t weight

b - Detected on t/c only

SI - Value is Above CRL : No Estimate Available



## ERASCO SERVICES INCORPORATED

## ACRYLIC MOUNTAIN ARSENAL PROGRAM

ALL UNITS ARE IN US/MS

## SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VALUES ABOVE THE CFI

	Sample	Field Sample	Site id	1,1,1-Trichloroethane	1,1,2-Dichloroethane	1,1,2-Dichloroethane	1,2-Dichloroethane	Bicyclobutene	Benzene	Tetrachloroethane	Chloroform	Carbon Tetrachloride	Methylene Chloride
08/26/89	23345	23346	FC4	1.2200	LT 0.0295	LT 0.0243	LT 0.0243	0.5920	LT 0.0417	1.1200	0.2640	0.4910	0.0502
				a						a	b	b	b
08/26/89	23347	23348	FC5	0.9750	LT 0.0295	LT 0.0243	LT 0.0243	0.4830	LT 0.0417	0.4540	0.2970	0.2900	0.0856
				a						a	b	b	b
09/1/89	23351	23352	FC1	0.6640	LT 0.0295	LT 0.0243	LT 0.0243	0.1020	LT 0.0417	0.4570	0.3650	0.1150	0.1020
				b				b		a	b	b	b
09/1/89	23353	23354	FC2	0.6690	LT 0.0295	LT 0.0243	LT 0.0243	0.0240	LT 0.0417	0.4020	0.3370	0.1340	0.2810
				a				b		a	b	b	b
09/1/89	23355	23356	FC3	0.6610	LT 0.0295	LT 0.0243	LT 0.0243	0.0208	LT 0.0417	0.4510	0.1930	0.1430	0.1920
				b						a	b	b	b
09/1/89	23357	23358	FC4	0.6630	LT 0.0295	LT 0.0243	LT 0.0243	0.0227	LT 0.0417	0.2740	0.3550	0.1410	0.0693
				a				b		a	b	b	b
09/1/89	23359	23360	FC5	0.5720	LT 0.0295	LT 0.0243	LT 0.0243	0.0667	LT 0.0417	0.5840	0.3420	0.1000	0.0558
				b						a	b	b	b
09/7/89	23364	23365	FC1	0.7140	LT 0.0295	LT 0.0243	LT 0.0243	0.2747	LT 0.0417	0.4560	0.3570	0.2160	0.1460
				a				b		a	b	b	b
09/7/89	23367	23368	FC2	0.6010	LT 0.0295	LT 0.0243	LT 0.0243	0.0219	LT 0.0417	0.2690	0.3290	0.1410	0.2080
				b				b		a	b	b	b
09/7/89	23370	23371	FC20	0.7610	LT 0.0295	LT 0.0243	LT 0.0243	0.0377	LT 0.0417	0.6130	0.3570	0.1810	0.3140
				a				b		a	b	b	b
09/7/89	23373	23374	FC3	0.7250	LT 0.0295	LT 0.0243	LT 0.0243	0.0264	LT 0.0417	0.4720	0.3650	0.1640	0.0710
				a				b		a	b	b	b
09/7/89	23376	23377	FC4	0.8570	LT 0.0295	LT 0.0243	LT 0.0243	0.0459	LT 0.0417	0.6560	0.4260	0.1760	0.0463
				a				b		a	b	b	b
09/7/89	23379	23380	FC5	0.5900	LT 0.0295	LT 0.0243	LT 0.0243	0.0317	LT 0.0417	0.6630	0.4710	0.2600	0.2240
				a				b		a	b	b	b
09/13/89	23386	23387	FC2	1.4300	LT 0.0295	LT 0.0243	LT 0.0243	0.0769	LT 0.0417	1.1600	0.7920	0.5760	0.1440
				a						a	b	b	b
09/13/89	23388	23389	FC3	1.6900	LT 0.0295	LT 0.0243	LT 0.0243	0.0896	LT 0.0417	1.3000	0.9930	0.5760	0.2660
				b						a	b	b	b
09/13/89	23390	23391	FC4	1.5100	LT 0.0295	LT 0.0243	LT 0.0243	0.0891	LT 0.0417	1.2100	0.8150	0.5220	0.2710
				b						a	b	b	b
09/13/89	23392	23393	FC5	1.3900	LT 0.0295	LT 0.0243	LT 0.0243	0.0249	LT 0.0417	1.1700	0.5720	0.5430	0.3140
				a						a	b	b	b

a - t/c weight 1.25t weight

b - Detected in t/c unit

SI - Value is Above CFI; No Estimate Available





ALL UNITS ARE IN ug/m<sup>3</sup>

## SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VALUES ABOVE THE ERI

Date	Sample Number	Site Id	Field Sample	Site Id	DibromoChloropropane	Dicyclopentadiene	Bis(ethylidene)disulfide	Ethylenecarbonate	Toluene	Methyl Isobutyl Ketone	N-Nitrosodimethylamine	Trans-1,3-Dihydro-2-Hydroxy-2,6-dimethylcyclohexene	Trichloroethylene	Tetrachloroethylene	2-Dichloroethane	para-xylene
09/19/89	23397	23498	FC1	LT 0.0332	LT 0.0451	LT 0.0469	0.1670	1.7800	LT 0.0176	LT 0.1071	LT 0.0399	0.4561	0.1791	0.4571	0.4571	
09/19/89	23400	23401	FC2	LT 0.0382	LT 0.0451	LT 0.0469	0.3236	61 b	0.3670	0.0216	LT 0.1020	LT 0.0399	0.4110	LT 0.0110	1.2176	
09/19/89	23403	23404	FC20	LT 0.0382	LT 0.0451	LT 0.0469	0.5770	2.8100	0.0916	LT 0.1020	LT 0.0399	0.4110	0.0524	1.3600		
09/19/89	23406	23407	FC3	LT 0.0382	LT 0.0451	LT 0.0469	0.6610	2.8700	0.0982	LT 0.1020	LT 0.0399	0.5040	0.0934	1.4700		
09/19/89	23409	23410	FC4	LT 0.0382	LT 0.0451	LT 0.0469	0.4530	61	0.3670	0.1210	LT 0.1020	LT 0.0399	0.4120	0.0674	1.5700	
09/19/89	23412	23413	FC5	LT 0.0382	LT 0.0451	LT 0.0469	0.5800	1.6200	0.1400	LT 0.1020	LT 0.0399	0.4710	0.1200	1.4500		
09/25/89	23417	23418	FC1	LT 0.0382	LT 0.0451	LT 0.0469	1.0600	61	0.3670	0.1410	LT 0.1020	LT 0.0399	1.2500	0.1010	1.0630	
09/25/89	23419	23420	FC2	LT 0.0382	LT 0.0451	LT 0.0469	1.2400	61	0.3670	0.1810	LT 0.1020	LT 0.0399	1.3600	0.1030	1.1600	
09/25/89	23421	23422	FC3	LT 0.0382	LT 0.0451	LT 0.0469	1.1900	61	0.3670	0.2000	LT 0.1020	LT 0.0399	1.2600	0.0927	1.1200	
09/25/89	23423	23424	FC4	LT 0.0382	LT 0.0451	LT 0.0469	1.2500	61	0.3670	0.2140	LT 0.1020	LT 0.0399	1.2900	0.1140	1.1600	

b = t/c weight, 1.25x weight

b - detected on t/c only

61 - Value is Above ERI; No Estimate Available

**APPENDIX S**  
**IRA-F Semi-Volatile Organic Compounds (SVOC) Data**

## SUMMARY OF SEMI-VOLATILES FOR IRAF

ALL UNITS ARE IN UG/M3

SAMPLE DATE	SAMPLE NUMBER	SITE ID	FIELD	ATRAZINE	CHLORDANE	CHLOROPHENYL METHYLSULFOXIDE	CHLOROPHENYL METHYLSULFONE	DIELDRIN	ENDRIN
05/10/89	16105	FC1	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/10/89	16106	FC2	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/10/89	16107	FC2D	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/10/89	16109	BF3	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/10/89	16111	BF7	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/10/89	16112	RIFS1	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/10/89	16113	BF5	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/16/89	16115	FC1	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/16/89	22001	FC2	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/16/89	22002	BF3	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/16/89	22004	BF5	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/16/89	22005	BF7	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/16/89	22006	RIFS1	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/22/89	22008	FC1	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/22/89	22009	FC2	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/22/89	22010	FC2D	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/22/89	22012	BF3	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/22/89	22014	BF5	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/22/89	22015	BF7	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/22/89	22016	RIFS1	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/28/89	22017	FC1	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/28/89	22019	FC2	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/28/89	22020	BF3	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/28/89	22022	BF5	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
05/28/89	22023	BF7	LT	0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF SEMI-VOLATILES FOR IRAF

ALL UNITS ARE IN UG/M<sup>3</sup>

SAMPLE DATE	FIELD SAMPLE NUMBER	SITE ID	FIELD					
			ISODRIN	MALATHION	DDOE	DDT	PARATHION	SUPONA
05/10/89	16105	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/10/89	16106	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/10/89	16107	FC2D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/10/89	16109	BF3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/10/89	16111	BF7	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/10/89	16112	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/10/89	16113	BF5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/16/89	16115	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/16/89	22001	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/16/89	22002	BF3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/16/89	22004	BF5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/16/89	22005	BF7	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/16/89	22006	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/22/89	22008	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/22/89	22009	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/22/89	22010	FC2D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/22/89	22012	BF3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/22/89	22014	BF5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/22/89	22015	BF7	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/22/89	22016	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/28/89	22017	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/28/89	22019	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/28/89	22020	BF3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/28/89	22022	BF5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/28/89	22023	BF7	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417

## SUMMARY OF SEMI-VOLATILES FOR IRAF

ALL UNITS ARE IN UG/M3

SAMPLE DATE	SAMPLE NUMBER	SITE ID	ATRAZINE	CHLORDANE	FIELD	CHLOROPHENYL METHYLSULFOXIDE	CHLOROPHENYL METHYLSULFONE	DIELORIN	ENORIN
05/28/89	22024	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/3/89	22027	FC2	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/3/89	22028	FC20	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/3/89	22029	BF3	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/3/89	22031	BF5	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/3/89	22032	BF7	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/3/89	22033	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/9/89	22035	FC1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/9/89	22036	FC2	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/9/89	22037	BF3	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/9/89	22039	BF5	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/9/89	22040	BF7	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
06/9/89	22041	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/9/89	19953	FC2	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/9/89	19988	FC20	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/9/89	19989	FC3	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/9/89	19990	FC4	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/9/89	19991	FC5	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/15/89	19994	FC2	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/15/89	19995	FC3	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/15/89	19996	FC4	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/15/89	19997	FC5	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/21/89	19999	FC1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/21/89	20000	FC2	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
07/21/89	22501	FC20	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/12/90

## SUMMARY OF SEMI-VOLATILES FOR IRAF

ALL UNITS ARE IN UG/M3

SAMPLE DATE	FIELD SAMPLE NUMBER	SITE ID	FIELD					
			ISODRIN	MALATHION	DDOE	DDT	PARATHION	SUPONA
05/28/89	22024	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/3/89	22027	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/3/89	22028	FC2D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/3/89	22029	BF3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/3/89	22031	BF5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/3/89	22032	BF7	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/3/89	22033	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/9/89	22035	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/9/89	22036	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/9/89	22037	BF3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/9/89	22039	BF5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/9/89	22040	BF7	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
06/9/89	22041	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/3/89	19958	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/3/89	19988	FC2D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/9/89	19989	FC3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/9/89	19990	FC4	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/9/89	19991	FC5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/15/89	19994	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/15/89	19995	FC3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/15/89	19996	FC4	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/15/89	19997	FC5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/21/89	19999	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/21/89	20000	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/21/89	22501	FC2D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417

## SUMMARY OF SEMI-VOLATILES FOR IRAF

ALL UNITS ARE IN UG/M3

SAMPLE DATE	SAMPLE NUMBER	FIELD ID	SITE	ATRAZINE	CHLORDANE	CHLOROPHENYL	CHLOROPHENYL	DIELDRIN	ENDRIN
						METHYLSULFOXIDE	METHYLSULFONE		
07/21/89	22502	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
07/21/89	22503	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
07/21/89	22504	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
07/27/89	22506	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
07/27/89	22507	FC2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
07/27/89	22508	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
07/27/89	22509	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
07/27/89	22510	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/3/89	22548	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/8/89	22549	FC2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/8/89	22550	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/8/89	22551	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/8/89	22552	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/14/89	22554	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/14/89	22555	FC2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/14/89	22556	FC2D	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/14/89	22557	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/14/89	22558	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/14/89	22559	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/20/89	22572	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/20/89	22574	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/20/89	22575	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/20/89	22576	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/26/89	22578	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	
08/26/89	22579	FC2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212	

## SUMMARY OF SEMI-VOLATILES FOR IRAF

ALL UNITS ARE IN UG/M<sup>3</sup>

SAMPLE DATE	SAMPLE NUMBER	FIELD SITE ID	ISOORIN	MALATHION	DOE	DDT	PARATHION	SUPONA
07/21/89	22502	FC3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/21/89	22503	FC4	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/21/89	22504	FC5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/27/89	22506	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/27/89	22507	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/27/89	22508	FC3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/27/89	22509	FC4	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
07/27/89	22510	FC5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/8/89	22548	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/8/89	22549	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/8/89	22550	FC3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/8/89	22551	FC4	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/8/89	22552	FC5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/14/89	22554	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/14/89	22555	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/14/89	22556	FC2D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/14/89	22557	FC3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/14/89	22558	FC4	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/14/89	22559	FC5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/20/89	22572	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/20/89	22574	FC3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/20/89	22575	FC4	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/20/89	22576	FC5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/26/89	22578	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
08/26/89	22579	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417

## SUMMARY OF SEMI-VOLATILES FOR IRAP

ALL UNITS ARE IN ug/m3

SAMPLE DATE	SAMPLE NUMBER	SITE ID	FIELD	ATRAZINE	CHLORDANE	CHLOROPHENYL METHYLSULFOXIDE	CHLOROPHENYL METHYLSULFONE	DIELDRIN	ENDRIN
08/26/89	22580	FC20	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
08/26/89	22581	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
08/26/89	22582	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
08/26/89	22583	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/1/89	22255	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/1/89	22256	FC2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/1/89	22257	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/1/89	22258	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/1/89	22259	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/7/89	22241	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/7/89	22242	FC2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/7/89	22243	FC20	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/7/89	22244	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/7/89	22245	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/7/89	22246	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/13/89	22248	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/13/89	22249	FC2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/13/89	22250	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/13/89	22272	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/13/89	22274	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/19/89	22271	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/19/89	22273	FC2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/19/89	22275	FC20	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/19/89	22277	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
09/19/89	22278	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	

## SUMMARY OF SEMI-VOLATILES FOR IRAF

ALL UNITS ARE IN UG/M<sup>3</sup>

SAMPLE DATE	SAMPLE NUMBER	FIELD ID	SITE	ISODRIN	MALATHION	DDE	DDT	PARATHION	SUPONA
08/26/89	22580	FC2D	LT 0.0451	LT 0.0181	LT 0.0417				
08/26/89	22581	FC3	LT 0.0451	LT 0.0181	LT 0.0417				
08/26/89	22582	FC4	LT 0.0451	LT 0.0181	LT 0.0417				
08/26/89	22583	FC5	LT 0.0451	LT 0.0181	LT 0.0417				
09/1/89	22255	FC1	LT 0.0451	LT 0.0181	LT 0.0417				
09/1/89	22256	FC2	LT 0.0451	LT 0.0181	LT 0.0417				
09/1/89	22257	FC3	LT 0.0451	LT 0.0181	LT 0.0417				
09/1/89	22258	FC4	LT 0.0451	LT 0.0181	LT 0.0417				
09/1/89	22259	FC5	LT 0.0451	LT 0.0181	LT 0.0417				
09/7/89	22241	FC1	LT 0.0451	LT 0.0181	LT 0.0417				
09/7/89	22242	FC2	LT 0.0451	LT 0.0181	LT 0.0417				
09/7/89	22243	FC2D	LT 0.0451	LT 0.0181	LT 0.0417				
09/7/89	22244	FC3	LT 0.0451	LT 0.0181	LT 0.0417				
09/7/89	22245	FC4	LT 0.0451	LT 0.0181	LT 0.0417				
09/7/89	22246	FC5	LT 0.0451	LT 0.0181	LT 0.0417				
09/13/89	22248	FC1	LT 0.0451	LT 0.0181	LT 0.0417				
09/13/89	22249	FC2	LT 0.0451	LT 0.0181	LT 0.0417				
09/13/89	22250	FC3	LT 0.0451	LT 0.0181	LT 0.0417				
09/13/89	22272	FC4	LT 0.0451	LT 0.0181	LT 0.0417				
09/13/89	22274	FC5	LT 0.0451	LT 0.0181	LT 0.0417				
09/19/89	22271	FC1	LT 0.0451	LT 0.0181	LT 0.0417				
09/19/89	22273	FC2	LT 0.0451	LT 0.0181	LT 0.0417				
09/19/89	22275	FC2D	LT 0.0451	LT 0.0181	LT 0.0417				
09/19/89	22277	FC3	LT 0.0451	LT 0.0181	LT 0.0417				
09/19/89	22278	FC4	LT 0.0451	LT 0.0181	LT 0.0417				

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF SEMI-VOLATILES FOR IMAF

ALL UNITS ARE IN UG/M<sup>3</sup>

SAMPLE DATE	SAMPLE NUMBER	SITE ID	ATRAZINE	CHLORDANE	CHLOROPHENYL	CHLOROPHENYL	DIELDRIN	ENGRIN
					METHYLSULFOXIDE	METHYLSULFONE		
09/19/89	22279	FC5	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212
09/25/89	22281	FC1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212
09/25/89	22282	FC2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212
09/25/89	22283	FC3	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212
09/25/89	22284	FC4	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0367	LT 0.0212

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/13/90

## SUMMARY OF SEMI-VOLATILES FOR IRAF

ALL UNITS ARE IN ug/m<sup>3</sup>

SAMPLE DATE	SAMPLE NUMBER	FIELD ID	SITE	MALATHION	DDE	DDT	PARATHION	SUPONA
			ISODRIN					
09/19/89	22279	FC5	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
09/25/89	22281	FC1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
09/25/89	22282	FC2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
09/25/89	22283	FC3	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
09/25/89	22284	FC4	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417

**APPENDIX T**  
**IRA-F Organics in Total Suspended Particulates (OTSP) Data**

EBASCO SERVICES INCORPORATED

ROCKY MOUNTAIN ARSENAL PROGRAM

06/13/90

## SUMMARY OF ORGANO CHLORINE PESTICIDE CONCENTRATIONS

IRAF

ALL UNITS ARE IN ug/m<sup>3</sup>

FIELD SAMPLE DATE	SAMPLE NUMBER	SITE ID	ALDRIN RESULTS	CHLORDANE RESULTS	DIELDRIN RESULTS	ENDRIN RESULTS	ISOENDRIN RESULTS	PPDDE RESULTS	PPDOT RESULTS
05/10/89	16105	FC1	0.0061	0.0010	0.0130	0.0014	0.0005	LT 0.0003	LT 0.0003
05/10/89	16106	FC2	0.0103	0.0011	0.0293	0.0032	0.0011	LT 0.0003	LT 0.0003
05/10/89	16107	FC2D	0.0088	0.0010	0.0296	0.0034	0.0106	LT 0.0003	LT 0.0003
05/10/89	16109	BF3	0.0009	0.0007	0.0092	0.0010	LT 0.0003	LT 0.0003	LT 0.0003
05/10/89	16111	BF7	LT 0.0003	LT 0.0004	0.0009	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
05/10/89	16112	RIFS1	LT 0.0003	LT 0.0004	0.0009	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
05/10/89	16113	BF5	0.0003	LT 0.0004	0.0016	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
05/16/89	16115	FC1	0.0009	0.0006	0.0006	0.0007	LT 0.0003	LT 0.0003	LT 0.0003
05/16/89	22001	FC2	0.0029	0.0005	0.0151	0.0017	0.0004	LT 0.0003	LT 0.0003
05/16/89	22002	BF3	0.0010	0.0008	0.0133	0.0013	0.0004	LT 0.0003	0.0004
05/16/89	22004	BF5	0.0004	LT 0.0004	0.0022	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
05/16/89	22005	BF7	0.0004	0.0006	0.0033	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
05/16/89	22006	RIFS1	LT 0.0003	LT 0.0004	0.0007	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
05/22/89	22008	FC1	LT 0.0003	LT 0.0004	0.0035	0.0007	LT 0.0003	LT 0.0003	LT 0.0003
05/22/89	22009	FC2	0.0006	0.0004	0.0074	0.0012	0.0007	LT 0.0003	0.0004
05/22/89	22010	FC2D	0.0004	0.0005	0.0070	0.0010	0.0006	LT 0.0003	LT 0.0003
05/22/89	22012	BF3	LT 0.0003	0.0003	0.0022	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
05/22/89	22014	BF5	LT 0.0003	LT 0.0004	0.0014	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
05/22/89	22015	BF7	LT 0.0003	LT 0.0004	0.0011	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
05/22/89	22016	RIFS1	LT 0.0003	LT 0.0004	0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
05/28/89	22017	FC1	LT 0.0003	0.0004	0.0037	0.0007	LT 0.0003	LT 0.0003	LT 0.0003
05/28/89	22019	FC2	LT 0.0003	0.0004	0.0055	0.0010	0.0007	LT 0.0003	LT 0.0003
05/28/89	22020	BF3	LT 0.0003	0.0007	0.0028	0.0006	0.0005	LT 0.0003	LT 0.0003
05/28/89	22022	BF5	LT 0.0003	LT 0.0004	0.0009	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
05/28/89	22023	BF7	LT 0.0003	LT 0.0004	0.0011	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
05/28/89	22024	RIFS1	LT 0.0003	LT 0.0004	0.0005	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
06/3/89	22027	FC2	0.0011	0.0006	0.0221	0.0023	0.0004	LT 0.0003	LT 0.0003
06/3/89	22028	FC2D	0.0009	0.0006	0.0237	0.0025	0.0005	LT 0.0003	LT 0.0003
06/3/89	22029	BF3	0.0004	0.0006	0.0133	0.0014	LT 0.0003	LT 0.0003	LT 0.0003
06/3/89	22031	BF5	LT 0.0003	0.0005	0.0023	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
06/3/89	22032	BF7	LT 0.0003	0.0004	0.0026	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
06/3/89	22033	RIFS1	LT 0.0003	LT 0.0004	0.0012	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
06/9/89	22035	FC1	0.0003	0.0010	0.0133	0.0015	0.0005	LT 0.0003	LT 0.0003
06/9/89	22036	FC2	0.0013	0.0015	0.0362	0.0045	0.0007	LT 0.0003	LT 0.0003
06/9/89	22037	BF3	0.0006	0.0019	0.0209	0.0021	0.0006	LT 0.0003	LT 0.0003
06/9/89	22039	BF5	LT 0.0003	LT 0.0004	0.0007	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
06/9/89	22040	BF7	LT 0.0003	0.0010	0.0053	0.0006	0.0005	LT 0.0003	LT 0.0003
06/9/89	22041	RIFS1	LT 0.0003	0.0007	0.0033	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
07/9/89	19958	FC2	LT 0.0003	LT 0.0004	0.0022	0.0007	LT 0.0003	LT 0.0003	LT 0.0003
07/9/89	19988	FC2D	LT 0.0003	LT 0.0004	0.0022	0.0006	LT 0.0003	LT 0.0003	LT 0.0003
07/9/89	19989	FC3	LT 0.0003	LT 0.0004	0.0016	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
07/9/89	19990	FC4	LT 0.0003	LT 0.0004	0.0007	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
07/9/89	19991	FCS	LT 0.0003	LT 0.0004	0.0010	0.0005	LT 0.0003	LT 0.0003	LT 0.0003
07/15/89	19994	FC2	0.0011	0.0012	0.0040	0.0021	0.0009	LT 0.0003	0.0010
07/15/89	19995	FC3	0.0006	0.0008	0.0205	0.0008	0.0005	LT 0.0003	LT 0.0003
07/15/89	19996	FC4	0.0006	0.0007	0.0067	0.0010	0.0004	LT 0.0003	LT 0.0003
07/15/89	19997	FCS	0.0005	0.0007	0.0050	0.0008	LT 0.0003	LT 0.0003	LT 0.0003
07/21/89	19999	FC1	LT 0.0003	LT 0.0004	0.0009	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
07/21/89	20000	FC2	LT 0.0003	0.0004	0.0019	0.0005	0.0004	LT 0.0003	LT 0.0003
07/21/89	22501	FC2D	LT 0.0003	LT 0.0004	0.0017	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
07/21/89	22502	FC3	LT 0.0003	0.0004	0.0015	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003

## SUMMARY OF ORGANO CHLORINE PESTICIDE CONCENTRATIONS

IRAF

ALL UNITS ARE IN UG/M3

SAMPLE DATE	SAMPLE NUMBER	SITE ID	FIELD ALDRIN RESULTS	FIELD CHLORDANE RESULTS	FIELD DIELDRIN RESULTS	FIELD ENDRIN RESULTS	FIELD ISODRIN RESULTS	FIELD PPDDE RESULTS	FIELD PPOCT RESULTS
07/21/89	22503	FC4	LT 0.0003	LT 0.0004	0.0008	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
07/21/89	22504	FC5	LT 0.0003	LT 0.0004	0.0009	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
07/27/89	22506	FC1	LT 0.0003	LT 0.0004	0.0012	0.0004	0.0006	LT 0.0003	LT 0.0003
07/27/89	22507	FC2	LT 0.0003	0.0005	0.0021	0.0005	0.0006	LT 0.0003	LT 0.0003
07/27/89	22508	FC3	LT 0.0003	0.0004	0.0022	0.0004	0.0006	LT 0.0003	LT 0.0003
07/27/89	22509	FC4	LT 0.0003	LT 0.0004	0.0010	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
07/27/89	22510	FC5	LT 0.0003	LT 0.0004	0.0014	0.0006	LT 0.0003	LT 0.0003	LT 0.0003
08/8/89	22548	FC1	0.0007	0.0004	0.0081	0.0007	LT 0.0003	LT 0.0003	LT 0.0003
08/8/89	22549	FC2	0.0028	0.0010	0.0293	0.0020	0.0006	LT 0.0003	LT 0.0003
08/8/89	22550	FC3	0.0017	0.0007	0.0240	0.0009	LT 0.0003	LT 0.0003	LT 0.0003
08/8/89	22551	FC4	0.0016	LT 0.0004	0.0149	0.0008	0.0003	LT 0.0003	LT 0.0003
08/8/89	22552	FC5	0.0010	0.0003	0.0370	0.0003	LT 0.0003	LT 0.0003	LT 0.0003
08/14/89	22554	FC1	0.0010	0.0008	0.0188	0.0012	LT 0.0003	LT 0.0003	LT 0.0003
08/14/89	22555	FC2	0.0007	0.0012	0.0144	0.0027	LT 0.0003	LT 0.0003	LT 0.0003
08/14/89	22556	FC20	0.0026	0.0311	0.0424	0.0026	LT 0.0003	LT 0.0003	LT 0.0003
08/14/89	22557	FC3	0.0006	0.0013	0.0172	0.0009	LT 0.0003	LT 0.0003	LT 0.0003
08/14/89	22558	FC4	0.0006	0.0004	0.0160	0.0012	LT 0.0003	LT 0.0003	LT 0.0003
08/14/89	22559	FC5	0.0008	0.0006	0.0159	0.0008	LT 0.0003	LT 0.0003	LT 0.0003
08/20/89	22572	FC1	0.0010	0.0003	0.0046	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
08/20/89	22574	FC3	LT 0.0003	LT 0.0004	0.0016	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
08/20/89	22575	FC4	0.0008	LT 0.0004	0.0057	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
08/20/89	22576	FC5	0.0005	LT 0.0004	0.0041	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
08/26/89	22578	FC1	LT 0.0003	LT 0.0004	0.0011	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
08/26/89	22579	FC2	LT 0.0003	LT 0.0004	0.0027	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
08/26/89	22580	FC20	LT 0.0003	LT 0.0004	0.0033	0.0004	LT 0.0003	LT 0.0003	LT 0.0003
08/26/89	22581	FC3	LT 0.0003	LT 0.0004	0.0019	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
08/26/89	22582	FC4	LT 0.0003	LT 0.0004	0.0015	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
08/26/89	22583	FC5	LT 0.0003	LT 0.0004	0.0013	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/1/89	22255	FC1	LT 0.0003	LT 0.0004	0.0007	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/1/89	22256	FC2	LT 0.0003	LT 0.0004	0.0012	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/1/89	22257	FC3	LT 0.0003	LT 0.0004	0.0014	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/1/89	22258	FC4	LT 0.0003	LT 0.0004	0.0007	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/1/89	22259	FC5	LT 0.0003	LT 0.0004	0.0005	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/7/89	22241	FC1	LT 0.0003	LT 0.0004	0.0009	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/7/89	22242	FC2	LT 0.0003	LT 0.0004	0.0015	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/7/89	22243	FC20	LT 0.0003	LT 0.0004	0.0014	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/7/89	22244	FC3	LT 0.0003	LT 0.0004	0.0009	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/7/89	22245	FC4	LT 0.0003	LT 0.0004	0.0006	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/7/89	22246	FC5	LT 0.0003	LT 0.0004	0.0005	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/13/89	22248	FC1	LT 0.0003	LT 0.0004	0.0011	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/13/89	22249	FC2	0.0004	LT 0.0004	0.0064	0.0005	LT 0.0003	LT 0.0003	LT 0.0003
09/13/89	22250	FC3	LT 0.0003	LT 0.0004	0.0027	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/13/89	22272	FC4	LT 0.0003	LT 0.0004	0.0023	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/13/89	22274	FC5	LT 0.0003	LT 0.0004	0.0010	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/19/89	22271	FC1	LT 0.0003	LT 0.0004	0.0020	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/19/89	22273	FC2	0.0008	LT 0.0004	0.0055	LT 0.0003	LT 0.0003	LT 0.0003	0.0006
09/19/89	22275	FC20	0.0009	LT 0.0004	0.0057	LT 0.0003	LT 0.0003	LT 0.0003	0.0006
09/19/89	22277	FC3	LT 0.0003	LT 0.0004	0.0022	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/19/89	22278	FC4	LT 0.0003	LT 0.0004	0.0017	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/19/89	22279	FC5	0.0033	LT 0.0004	0.0019	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/25/89	22281	FC1	LT 0.0003	LT 0.0004	0.0012	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003

EBASCO SERVICES INCORPORATED

ROCKY MOUNTAIN ARSENAL PROGRAM

06/13/80

## SUMMARY OF ORGANO CHLORINE PESTICIDE CONCENTRATIONS

IRAF

ALL UNITS ARE IN ug/m<sup>3</sup>

## FIELD

SAMPLE DATE	SAMPLE NUMBER	SITE ID	ALDRIN RESULTS	CHLORDANE RESULTS	DIELDRIN RESULTS	ENDRIN RESULTS	ISOPDRIN RESULTS	PPDDE RESULTS	PPDOT RESULTS
09/25/89	22282	FC2	LT 0.0003	LT 0.0004	0.0022	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/25/89	22283	FC3	LT 0.0003	LT 0.0004	0.0012	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003
09/25/89	22284	FC4	LT 0.0003	LT 0.0004	0.0012	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003

**APPENDIX U**  
**RIFS Data**

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	NET	
				CONC ug/m <sup>3</sup>	WEIGHT kg
12/20/88	RIFSI	14708	1298	81.83	106.25
12/21/88	RIFSI	14710	1379	61.02	84.15
12/27/88	RIFSI	14714	1436	88.38	126.95
12/28/88	RIFSI	14716	1384	70.95	98.2
12/29/88	RIFSI	14718	1396	97.99	136.75
12/30/88	RIFSI	14720	1404	93.96	131.9
01/03/89	RIFSI	14724	1438	128.38	184.6
01/04/89	RIFSI	14726	1377	64.14	88.3
01/05/89	RIFSI	14730	1271	35.45	45.05
01/06/89	RIFSI	14732	1475	32.11	47.35
01/08/89	RIFSI	14734	438	182.69	80.1
01/09/89	RIFSI	14736	1392	59.79	83.25
01/10/89	RIFSI	14737	1409	35.31	49.75
01/11/89	RIFSI	14739	1425	27.93	39.8
01/12/89	RIFSI	14740	1451	70.88	102.85
01/13/89	RIFSI	14742	1386	77.87	107.95
01/17/89	RIFSI	14748	1415	56.10	79.35
01/18/89	RIFSI	14752	1372	52.16	71.55
01/25/89	RIFSI	14758	1474	68.47	100.9
01/26/89	RIFSI	14760	1363	59.14	80.6
01/30/89	RIFSI	14766	1362	63.00	85.8
01/31/89	RIFSI	14768	1375	61.90	85.1
02/08/89	RIFSI	14780	1448	138.67	200.75
02/09/89	RIFSI	14784	1445	161.90	233.95
02/13/89	RIFSI	14786	1459	30.37	44.3
02/14/89	RIFSI	14788	1423	77.27	109.95
02/22/89	RIFSI	14797	1426	67.69	96.55
02/24/89	RIFSI	14953	1381	73.37	101.35
02/27/89	RIFSI	14955	1441	6.28	9.05
02/28/89	RIFSI	14957	1385	45.91	63.6
03/07/89	RIFSI	14964	1391	98.96	137.7
03/09/89	RIFSI	14969	1399	79.12	110.7
03/15/89	RIFSI	14973	1341	58.37	78.25
03/17/89	RIFSI	14978	1396	67.44	94.15
03/20/89	RIFSI	14980	1365	39.97	54.55
03/21/89	RIFSI	14981	1405	83.07	116.75
03/23/89	RIFSI	14984	1413	51.94	73.4
03/28/89	RIFSI	14986	1375	42.32	58.2
03/30/89	RIFSI	14987	1407	33.37	46.95
04/05/89	RIFSI	14989	1344	55.20	74.2
04/06/89	RIFSI	14990	1393	53.18	74.1
04/10/89	RIFSI	14992	1415	53.49	75.7
04/13/89	RIFSI	18351	1376	66.35	91.3
04/18/89	RIFSI	18353	1414	73.79	104.35
04/20/89	RIFSI	18354	1387	53.31	73.95
04/24/89	RIFSI	18356	1329	111.20	147.8
04/25/89	RIFSI	18358	1374	94.33	129.6
05/04/89	RIFSI	18359	1362	58.87	91.95

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	NET	
				CONC ug/m <sup>3</sup>	WEIGHT kg
12/20/88	RIF52	14709	1352	53.02	71.7
12/21/88	RIF52	14711	1406	28.55	40.15
12/27/88	RIF52	14715	1421	56.45	80.2
12/30/88	RIF52	14722	1404	81.34	114.2
01/03/89	RIF52	14725	1428	72.39	103.4
01/04/89	RIF52	14729	1444	32.90	47.5
01/09/89	RIF52	14735	1410	46.29	65.25
01/13/89	RIF52	14743	1458	51.58	75.2
01/17/89	RIF52	14751	1415	51.46	72.8
01/18/89	RIF52	14753	1387	27.32	37.9
01/25/89	RIF52	14759	1424	41.16	58.6
01/26/89	RIF52	14763	1431	48.10	68.85
01/30/89	RIF52	14767	1328	36.79	48.85
01/31/89	RIF52	14771	1388	32.71	45.4
02/08/89	RIF52	14782	1461	88.30	129.05
02/09/89	RIF52	14785	1437	121.41	174.5
02/13/89	RIF52	14787	1415	16.50	23.35
02/14/89	RIF52	14790	1429	42.95	61.35
02/22/89	RIF52	14799	1426	43.48	62
02/24/89	RIF52	14954	1386	42.60	59.05
02/27/89	RIF52	14956	1466	6.69	9.8
02/28/89	RIF52	14959	1345	30.33	40.8
03/07/89	RIF52	14965	1397	76.54	106.9
03/09/89	RIF52	14970	1404	71.00	99.7
03/15/89	RIF52	14975	1345	50.51	67.95
03/17/89	RIF52	14979	1407	62.27	87.6

TOTAL SUSPENDED PARTICULATES (TSP) DATA  
(IN ug/m<sup>3</sup>)

DATE	SITE	TAG NO.	VOLUME M <sup>3</sup>	NET	
				CONC ug/m <sup>3</sup>	WEIGHT M <sup>6</sup>
12/15/88	RIFS1D	14702	1488	69.29	103.1
12/21/88	RIFS1D	14712	1378	61.14	84.25
12/30/88	RIFS1D	14721	1406	94.93	133.45
01/04/89	RIFS1D	14727	1377	64.73	89.15
01/13/89	RIFS1D	14744	1388	77.30	107.25
01/17/89	RIFS1D	14749	1428	58.04	82.9
01/26/89	RIFS1D	14761	1366	60.84	83.1
01/31/89	RIFS1D	14769	1376	64.56	88.8
02/08/89	RIFS1D	14781	1469	142.53	209.4
02/14/89	RIFS1D	14789	1422	81.41	115.75
02/28/89	RIFS1D	14958	1386	48.25	66.9
03/15/89	RIFS1D	14974	1341	59.34	79.55
03/30/89	RIFS1D	14988	1402	34.23	48
04/13/89	RIFS1D	18352	1377	68.22	93.95
04/24/89	RIFS1D	18357	1330	109.19	145.25

EBASCO SERVICES INCORPORATED

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/97

## SUMMARY OF ARSENIC AND METALS

RIFS

ALL UNITS ARE IN ug/m3

FIELD		SAMPLE	SAMPLE	SITE	ARSENIC	CADMIUM	CHROMIUM	COPPER	LEAD	ZINC
SAMPLE	DATE	NUMBER	ID	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS	RESULTS
12/16/88	14702	RIFS1C		0.0012	0.0044	LT 0.0051	0.0810	0.0580	0.0580	
12/21/88	14708	RIFS1		0.0010	0.0014	LT 0.0051	0.0930	0.0550	0.0770	
12/21/88	14709	RIFS2		0.0010	LT 0.0004	LT 0.0051	0.0990	0.0350	0.0450	
12/22/88	14710	RIFS1	LT	0.0004	LT 0.0004	LT 0.0051	0.0680	0.0250	0.0520	
12/22/88	14711	RIFS2	LT	0.0004	LT 0.0004	LT 0.0051	0.0410	0.0150	0.0310	
12/22/88	14712	RIFS1D	LT	0.0004	LT 0.0004	LT 0.0051	0.0580	0.0240	0.0450	
12/28/88	14714	RIFS1		0.0010	0.0018	LT 0.0051	0.0770	0.0430	0.0500	
12/28/88	14715	RIFS2		0.0002	0.0006	LT 0.0051	0.0670	0.0270	0.0280	
12/29/88	14716	RIFS1		0.0009	0.0027	LT 0.0051	0.0570	0.0490	0.0520	
12/30/88	14718	RIFS1		0.0008	0.0052	LT 0.0051	0.1200	0.0590	0.0690	
12/31/88	14720	RIFS1		0.0011	0.0016	LT 0.0051	0.1200	0.0560	0.0570	
12/31/88	14721	RIFS1D		10.000	0.0018	LT 0.0051	0.1400	0.0580	0.0590	
12/31/88	14722	RIFS2		0.0013	0.0009	LT 0.0051	0.0950	0.0370	0.0400	
01/4/89	14724	RIFS1		0.0009	0.0019	LT 0.0051	0.1100	0.0770	0.1000	
01/4/89	14725	RIFS2		0.0005	0.0012	LT 0.0051	0.0830	0.0360	0.0580	
01/5/89	14726	RIFS1		0.0006	0.0011	LT 0.0051	0.0700	0.0360	0.0530	
01/5/89	14727	RIFS1D		0.0005	0.0013	LT 0.0051	0.0610	0.0390	0.0530	
01/5/89	14729	RIFS2		0.0007	0.0007	LT 0.0051	0.0540	0.0230	0.0370	
01/6/89	14730	RIFS1		0.0005	0.0029	LT 0.0051	0.0866	0.0478	0.0389	
01/7/89	14732	RIFS1	LT	0.0004	LT 0.0004	LT 0.0051	0.0109	0.0126	0.0217	
01/9/89	14734	RIFS1		0.0014	LT 0.0004	LT 0.0051	LT 0.0087	0.0291	0.0689	
01/10/89	14735	RIFS2	LT	0.0004	LT 0.0004	LT 0.0051	0.0929	0.0077	0.0215	
01/10/89	14736	RIFS1		0.0005	0.0010	LT 0.0051	0.0505	0.0185	0.0437	
01/11/89	14737	RIFS1	LT	0.0004	LT 0.0004	LT 0.0051	0.0428	0.0128	0.0273	
01/12/89	14739	RIFS1		0.0006	0.0011	LT 0.0051	0.0701	0.0214	0.0304	
01/13/89	14740	RIFS1		0.0004	0.0017	LT 0.0051	0.0834	0.0488	0.0567	
01/14/89	14742	RIFS1		0.0006	0.0013	LT 0.0051	0.1080	0.0455	0.0791	
01/14/89	14743	RIFS2		0.0005	0.0009	LT 0.0051	0.1040	0.0311	0.0337	
01/18/89	14748	RIFS1		0.0007	0.0014	LT 0.0051	0.1070	0.0318	0.0485	
01/18/89	14749	RIFS1D		0.0006	0.0016	LT 0.0051	0.1020	0.0335	0.0494	
01/18/89	14751	RIFS2		0.0007	0.0006	LT 0.0051	0.0735	0.0201	0.0415	
01/19/89	14752	RIFS1	LT	0.0004	LT 0.0004	LT 0.0051	0.0480	0.0150	0.0319	
01/19/89	14753	RIFS2	LT	0.0004	LT 0.0004	LT 0.0051	0.0535	0.0073	0.0143	
01/26/89	14758	RIFS1		0.0009	0.0009	LT 0.0051	0.1490	0.0425	0.0642	
01/26/89	14759	RIFS2		0.0006	LT 0.0004	LT 0.0051	0.1680	0.0217	0.0374	
01/27/89	14760	RIFS1		0.0005	LT 0.0004	LT 0.0051	0.1310	0.0460	0.0641	
01/27/89	14761	RIFS1D		0.0005	LT 0.0004	LT 0.0051	0.1570	0.0466	0.0649	
01/27/89	14763	RIFS2		0.0005	LT 0.0004	LT 0.0051	0.1080	0.0267	0.0423	
01/31/89	14766	RIFS1	LT	0.0004	0.0012	LT 0.0051	0.1150	0.0476	0.0650	
01/31/89	14767	RIFS2	LT	0.0004	LT 0.0004	LT 0.0051	0.0986	0.0233	0.0322	
02/1/89	14768	RIFS1		0.0008	LT 0.0004	LT 0.0051	0.0305	0.0156	0.0270	
02/1/89	14769	RIFS1D		0.0008	LT 0.0004	LT 0.0051	0.0226	0.0153	0.0273	
02/1/89	14771	RIFS2		0.0006	LT 0.0004	LT 0.0051	0.0239	LT 0.0050	0.0143	
02/9/89	14780	RIFS1		0.0015	0.0067	LT 0.0051	0.0671	0.0656	0.0657	
02/9/89	14781	RIFS1D		0.0015	0.0065	LT 0.0051	0.0749	0.0674	0.0655	
02/9/89	14782	RIFS2		0.0013	0.0032	LT 0.0051	0.0732	0.0422	0.0383	
02/10/89	14784	RIFS1		0.0016	0.0057	LT 0.0051	0.0734	0.1080	0.1110	
02/10/89	14785	RIFS2		0.0013	0.0026	LT 0.0051	0.0918	0.0779	0.0676	
02/14/89	14786	RIFS1		0.0006	LT 0.0004	LT 0.0051	0.0324	0.0070	0.0141	
02/14/89	14787	RIFS2		0.0005	LT 0.0004	LT 0.0051	0.0263	LT 0.0050	0.0080	
02/15/89	14788	RIFS1		0.0038	LT 0.0004	LT 0.0051	0.0566	0.0186	0.0327	

EBASCO SERVICES INCORPORATED

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF ARSENIC AND METALS

RIFS

ALL UNITS ARE IN ug/m<sup>3</sup>

FIELD		SAMPLE DATE	SAMPLE NUMBER	SITE ID	ARSENIC RESULTS	CADMIUM RESULTS	CHROMIUM RESULTS	COPPER RESULTS	LEAD RESULTS	ZINC RESULTS
02/15/89	14789	RIFS1D	0.0039	LT	0.0004	LT	0.0051	0.0690	0.0224	0.0362
02/15/89	14790	RIFS2	0.0034	LT	0.0004	LT	0.0051	0.0543	0.0104	0.0162
02/23/89	14797	RIFS1	0.0012		0.0012		0.0141	0.0468	0.0414	0.0606
02/23/89	14799	RIFS2	0.0008		0.0005		LT 0.0051	0.0715	0.0244	0.0418
02/25/89	14953	RIFS1	0.0008		0.0013		LT 0.0051	0.0540	0.0459	0.0854
02/25/89	14954	RIFS2	0.0006		0.0007		LT 0.0051	0.1310	0.0275	0.0467
03/8/89	14964	RIFS1	0.0010		0.0025		LT 0.0051	0.1180	0.0553	0.0791
03/8/89	14965	RIFS2	0.0008		0.0021		LT 0.0051	0.1260	0.0385	0.0501
03/10/89	14969	RIFS1	0.0025		0.0020		LT 0.0051	0.1010	0.0460	0.0635
03/10/89	14970	RIFS2	0.0023		0.0013		LT 0.0051	0.0976	0.0260	0.0457
03/16/89	14973	RIFS1	0.0007		0.0040		LT 0.0051	0.1180	0.0230	0.0442
03/16/89	14974	RIFS1D	0.0006		0.0042		LT 0.0051	0.1360	0.0242	0.0469
03/16/89	14975	RIFS2	LT 0.0004		LT 0.0004		LT 0.0051	0.0535	0.0083	0.0210
03/18/89	14976	RIFS1	0.0005		LT 0.0004		LT 0.0051	0.1200	0.0076	0.0192
03/18/89	14979	RIFS2	0.0007		LT 0.0004		LT 0.0051	0.0598	0.0062	0.0126
03/21/89	14980	RIFS1	0.0007		LT 0.0004		LT 0.0051	0.1330	0.0152	0.0303
03/22/89	14981	RIFS1	0.0005		LT 0.0004		LT 0.0051	0.0904	0.0147	0.0317
03/24/89	14984	RIFS1	0.0005		0.0009		LT 0.0051	0.0670	0.0046	0.0290
03/29/89	14986	RIFS1	LT 0.0004		LT 0.0004		LT 0.0051	0.1250	0.0139	0.0212
03/31/89	14987	RIFS1	LT 0.0004		LT 0.0004		LT 0.0051	0.1110	0.0161	0.0301
03/31/89	14988	RIFS1D	LT 0.0004		LT 0.0004		LT 0.0051	0.1300	0.0165	0.0309
04/6/89	14989	RIFS1	LT 0.0004		LT 0.0004		LT 0.0051	0.0237	0.0157	0.0294
04/7/89	14990	RIFS1	LT 0.0004		0.0009		LT 0.0051	0.0551	0.0204	0.0323
04/11/89	14992	RIFS1	0.0005		LT 0.0004		LT 0.0051	0.0919	0.0241	0.0364
04/16/89	18351	RIFS1	0.0006		LT 0.0004		LT 0.0051	0.0894	0.0368	0.0454
04/16/89	18352	RIFS1D	0.0006		LT 0.0004		LT 0.0051	0.1180	0.0381	0.3330
04/25/89	18356	RIFS1	0.0007		LT 0.0004		LT 0.0051	0.1020	0.0076	0.0294
04/25/89	18357	RIFS1D	0.0007		LT 0.0004		LT 0.0051	0.0468	0.0134	0.0310
04/26/89	18358	RIFS1	0.0008		LT 0.0004		LT 0.0051	0.1220	0.0167	0.0342
05/5/89	18359	RIFS1	0.0005		LT 0.0004		LT 0.0051	GT 0.3070	0.0167	0.0362

EBASCO SERVICES INCORPORATED

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF MERCURY FOR RIFS

ALL UNITS ARE IN UG/M<sup>3</sup>

SAMPLE DATE	SAMPLE NUMBER	FIELD SITE ID	MERCURY RESULTS
12/16/88	5841	RIFS1C	LT 0.6200
12/21/88	5848	RIFS1	LT 0.6200
12/21/88	5852	RIFS2	LT 0.6200
12/22/88	5859	RIFS1	LT 0.6200
12/22/88	5863	RIFS1D	LT 0.6200
12/22/88	5871	RIFS2	LT 0.6200
12/28/88	5881	RIFS2	LT 0.6200
12/28/88	5885	RIFS1	LT 0.6200
12/29/88	5904	RIFS1	LT 0.6200
12/30/88	5908	RIFS1	LT 0.6200
12/31/88	5888	RIFS1	LT 0.6200
12/31/88	5892	RIFS1D	LT 0.6200
12/31/88	5896	RIFS2	LT 0.6200
01/26/89	16662	RIFS1	LT 0.6180
01/26/89	16666	RIFS2	LT 0.6180
01/27/89	16670	RIFS1	LT 0.6180
01/27/89	16674	RIFS1D	LT 0.6180
01/27/89	16678	RIFS2	LT 0.6180
01/31/89	16686	RIFS1	LT 0.6180
01/31/89	16690	RIFS2	LT 0.6180
02/1/89	16694	RIFS1	LT 0.6180
02/1/89	16698	RIFS1D	LT 0.6180
02/1/89	16702	RIFS2	LT 0.6180
02/9/89	16718	RIFS1	LT 0.6180
02/9/89	16722	RIFS1D	LT 0.6180
02/9/89	16726	RIFS2	LT 0.6180
02/10/89	16734	RIFS1	LT 0.6180
02/10/89	16738	RIFS2	LT 0.6180
02/14/89	16742	RIFS1	LT 0.6180
02/14/89	16746	RIFS2	LT 0.6180
02/15/89	16750	RIFS1	LT 0.6180
02/15/89	16754	RIFS1D	LT 0.6180
02/15/89	16758	RIFS2	LT 0.6180
02/23/89	20002	RIFS1	LT 0.6180
02/23/89	20002	RIFS1	LT 0.6200
02/23/89	20006	RIFS2	LT 0.6180
02/23/89	20006	RIFS2	LT 0.6200
02/25/89	20014	RIFS1	LT 0.6180
02/25/89	20014	RIFS1	LT 0.6200
02/25/89	20018	RIFS2	LT 0.6180
02/25/89	20018	RIFS2	LT 0.6200
02/28/89	20022	RIFS1	LT 0.6180
02/28/89	20022	RIFS1	LT 0.6200
02/28/89	20026	RIFS2	LT 0.6180
02/28/89	20026	RIFS2	LT 0.6200
03/1/89	20030	RIFS1	LT 0.6180
03/1/89	20030	RIFS1	LT 0.6200
03/1/89	20034	RIFS1D	LT 0.6180
03/1/89	20034	RIFS1D	LT 0.6200
03/8/89	20048	RIFS1	LT 0.6180
03/8/89	20048	RIFS1	LT 0.6200

EBASCO SERVICES INCORPORATED

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF MERCURY FOR RIFS

ALL UNITS ARE IN ug/m<sup>3</sup>

SAMPLE DATE	SAMPLE NUMBER	FIELD SITE ID	MERCURY RESULTS
03/8/89	20052	RIFS2	LT 0.6180
03/8/89	20052	RIFS2	LT 0.6200
03/10/89	20060	RIFS1	LT 0.6180
03/10/89	20060	RIFS1	LT 0.6200
03/10/89	20064	RIFS2	LT 0.6180
03/10/89	20064	RIFS2	LT 0.6200
03/16/89	20068	RIFS1	LT 0.6180
03/16/89	20068	RIFS1	LT 0.6200
03/16/89	20072	RIFS1D	LT 0.6180
03/16/89	20072	RIFS1D	LT 0.6200
03/16/89	20076	RIFS2	LT 0.6180
03/16/89	20076	RIFS2	LT 0.6200
03/18/89	20080	RIFS1	LT 0.6180
03/18/89	20080	RIFS1	LT 0.6200
03/18/89	20084	RIFS2	LT 0.6180
03/18/89	20084	RIFS2	LT 0.6200
03/21/89	20088	RIFS1	LT 0.6180
03/22/89	20092	RIFS1	LT 0.6180
03/26/89	20100	RIFS1	LT 0.6180
03/29/89	20104	RIFS1	LT 0.6180
03/31/89	20108	RIFS1	LT 0.6180
03/31/89	20112	RIFS1D	LT 0.6180
04/6/89	20115	RIFS1	LT 0.6180
04/7/89	20118	RIFS1	LT 0.6180
04/11/89	20124	RIFS1	LT 0.6180
04/14/89	20127	RIFS1	LT 0.6180
04/14/89	20130	RIFS1D	LT 0.6180
04/19/89	20133	RIFS1	LT 0.6180
04/21/89	20136	RIFS1	LT 0.6180
04/25/89	20142	RIFS1	LT 0.6180
04/25/89	20145	RIFS1D	LT 0.6180
04/26/89	20148	RIFS1	LT 0.6180
05/5/89	20151	RIFS1	LT 0.6180

## SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VALUES ABOVE THE QL

ALL UNITS ARE IN USE/MS

Sample Date	Field Sample Number	Site Id	1,1,1-Trichloroethane	1,1,2-Dichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,2-Dibromoethane	Benzene	Carbon Tetrachloride	Chloroform	Methyl Chloride		
10/21/88	05801TC RIF51	0.7150	b	L1 0.0300	L1 0.0240	L1 0.0210	2.8400	L1 0.0417	1.0200	0.2080	5.2200	0.1400	L1 0.0330
10/29/88	05803TC RIF51	2.1900	a	L1 0.0295	L1 0.0263	0.1300	61 0.3470	0.4930	61 0.3470	0.4350	5.2300	0.5260	0.0734
11/1/88	05802TC RIF51	0.9720	a	L1 0.0295	L1 0.0263	L1 0.0208	2.7500	L1 0.0417	2.1200	0.2760	13.700	1.1500	0.1230
11/2/88	05804TC RIF51	0.6	a	L1 0.0295	L1 0.0263	L1 0.0208	4.5600	L1 0.0417	3.5600	0.3850	3.8100	0.0959	L1 0.0330
11/10/88	05806TC RIF51	1.5200	a	L1 0.0295	L1 0.0263	0.1600	1.6600	L1 0.0417	4.6300	0.7460	1.3200	0.1620	L1 0.0330
11/17/88	05808 05809 RIF51	2.7200	a	L1 0.0295	L1 0.0263	0.2400	2.8000	L1 0.0417	5.3900	0.6730	5.3100	0.1350	L1 0.0330
11/19/88	05812 05813 RIF51	0.9360	a	L1 0.0295	L1 0.0263	0.0737	0.5700	L1 0.0417	1.4300	0.5720	0.6060	0.3910	L1 0.0330
11/22/88	05814 05815 RIF51	0.9540	a	L1 0.0295	L1 0.0263	L1 0.0208	1.9400	L1 0.0417	2.9000	0.3150	1.7100	L1 0.0208	L1 0.0330
11/23/88	05816 05817 RIF51	0.3470	a	L1 0.0295	L1 0.0263	L1 0.0208	2.3700	L1 0.0417	2.7200	0.2420	2.5100	L1 0.0208	L1 0.0330
12/1/88	05820 05821 RIF51	0.8590	a	L1 0.0295	L1 0.0263	L1 0.0208	2.1400	L1 0.0417	2.4500	0.2100	2.7600	L1 0.0208	L1 0.0330
12/2/88	05824 05825 RIF51	1.2100	a	L1 0.0295	L1 0.0263	L1 0.0208	1.5200	L1 0.0417	2.5300	0.2610	2.0200	L1 0.0208	L1 0.0330
12/6/88	05826 05827 RIF51	4.7800	a	L1 0.0295	L1 0.0263	L1 0.0208	4.4400	0.4140	6.5100	0.6160	4.9200	1.3300	L1 0.0330
12/10/88	05828 05829 RIF51	4.4300	a	L1 0.0295	L1 0.0263	L1 0.0208	2.3500	L1 0.0417	9.5900	0.9460	5.2000	0.4710	L1 0.0330
12/13/88	05832 05833 RIF51	1.7100	a	L1 0.0295	L1 0.0263	0.0390	1.1500	L1 0.0417	3.2400	0.4590	1.2200	0.0710	L1 0.0330
12/16/88	05839 05840 RIF51C	5.3600	a	L1 0.0295	L1 0.0263	L1 0.0208	2.8500	L1 0.0417	9.4800	1.3100	3.7700	0.4580	L1 0.0330
12/21/88	05846 05847 RIF51	4.2400	a	L1 0.0295	L1 0.0263	L1 0.0208	2.4000	L1 0.0417	6.5300	0.8070	7.4200	0.3970	L1 0.0330
12/21/88	05850 05851 RIF52	3.7400	a	L1 0.0295	L1 0.0263	L1 0.0208	1.1900	0.0763	4.6400	1.3200	6.8600	0.4720	L1 0.0330

a - t/c weight 1.25% weight

b - Detected on t/c only

b1 - Value Is Above QL; No Estimate Available

Sample Date	Field Sample Number	Site id	Dibromo-chloropropane	Dicyclopentadiene	Dibutyltin sulfide	Ethylbenzene	Toluene	Methylisobutyl N-Methoxyketone	Trans-1,2-Diethylamine	2-Dichloroethane	Trichloroethene	Tetrachloroethene	Hepta-chloroethene	Penta-chloroethene
10/22/03	058017	058017C RIFS1	L1 0.030	L1 0.0450	L1 0.0470	1.6300	5.7600	0.2140	L1 0.1000	L1 0.0600	1.1900	L1 0.0520	L1 0.0520	6.3800
10/29/03	058017	058017C RIFS1	0.000	3.7700	0.1130	2.9800	16.500	L1 0.0174	L1 0.1020	L1 0.0399	1.8500	0.1590	0.1590	61 0.6940
11/1/03	058021	058021C RIFS1	0.3800	L1 0.0451	L1 0.0469	1.7200	9.9000	0.1170	L1 0.1020	L1 0.0399	1.9200	0.2560	61 0.6940	a
11/2/03	058017	058017C RIFS1	L1 0.032	0.2920	L1 0.0469	2.4700	14.800	0.5140	L1 0.1020	L1 0.0399	1.3400	0.1930	61 0.6940	a
11/10/03	058017	058017C RIFS1	L1 0.0451	L1 0.0469	L1 0.0469	1.0800	5.4100	L1 0.0174	L1 0.1020	L1 0.0399	0.5740	0.0710	1.9300	a
11/17/03	058018	058018 RIFS1	L1 0.032	0.2760	L1 0.0469	1.8200	7.6900	L1 0.0174	L1 0.1020	L1 0.0399	1.1200	0.1420	3.2200	
11/19/03	058012	058012 RIFS1	L1 0.032	L1 0.0451	L1 0.0469	0.4360	2.7500	L1 0.0174	L1 0.1020	L1 0.0399	0.5030	L1 0.0521	1.5600	
11/22/03	058014	058015 RIFS1	L1 0.032	L1 0.0451	L1 0.0469	1.3800	4.5000	L1 0.0174	L1 0.1020	L1 0.0399	1.3600	0.0649	2.4200	
11/23/03	058016	058017 RIFS1	L1 0.032	L1 0.0451	L1 0.0469	1.4900	5.4200	L1 0.0174	L1 0.1020	L1 0.0399	2.2700	0.0835	2.7100	
12/1/03	058020	058021 RIFS1	L1 0.032	L1 0.0451	L1 0.0538	1.6200	6.2100	L1 0.0174	L1 0.1020	L1 0.0399	2.0000	0.0710	2.5500	
12/2/03	058024	058025 RIFS1	L1 0.032	L1 0.0451	L1 0.0469	0.9000	4.5000	L1 0.0174	L1 0.1020	L1 0.0399	1.4700	0.0948	1.9700	
12/6/03	058026	058027 RIFS1	L1 0.032	L1 0.0451	L1 0.0469	3.0000	11.900	0.2590	L1 0.1020	L1 0.0399	2.8000	0.2100	3.3800	
12/10/03	058028	058029 RIFS1	L1 0.032	L1 0.0451	L1 0.0469	1.6200	9.1200	L1 0.0174	L1 0.1020	L1 0.0399	1.5600	0.1220	3.3100	
12/13/03	058032	058033 RIFS1	L1 0.032	L1 0.0451	L1 0.0469	0.9000	4.5300	L1 0.0174	L1 0.1020	L1 0.0399	1.3200	L1 0.0521	1.5000	
12/16/03	058039	058040 RIFS1C	L1 0.042	L1 0.0451	L1 0.0469	2.3000	7.5400	L1 0.0174	L1 0.1020	L1 0.0399	1.0500	0.1260	3.6100	
12/21/03	058046	058047 RIFS1	L1 0.032	L1 0.0451	L1 0.0469	1.8500	7.3600	L1 0.0174	L1 0.1020	L1 0.0399	1.8500	0.4760	2.7300	
12/21/03	058050	058051 RIFS2	L1 0.032	L1 0.0451	L1 0.0469	0.8630	4.3200	L1 0.0174	L1 0.1020	L1 0.0399	0.7910	0.1350	1.6500	

a - t/c weight 1.25% weight

b - Detected on t/c only

SI - Value is Above CRL; No Estimate Available

Sample Date	Field Sample Number	Site Id	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,2-Ethylbenzene	Styrene	1,2-Cyclohexadiene	Carbon Tetrachloride	Methylene Chloride	Chloroform	Chlorobenzene	
12/21/88	05860	05861	RIFS1	1,090	LT 0.0300	LT 0.0240	0.1100	0.8160	LT 0.0420	2.5600	0.7160	0.830	0.1530	LT 0.0330
12/22/88	05864	05865	RIFS1D	1,140	LT 0.0300	LT 0.0240	LT 0.0210	0.8390	LT 0.0420	2.6500	0.7160	0.820	0.1500	LT 0.0330
12/22/88	05872	05873	RIFS2	0.9730	LT 0.0300	LT 0.0240	0.0920	0.4810	LT 0.0420	1.9400	0.6350	1.1000	10.000	LT 0.0330
12/28/88	05883	05884	RIFS1	3,140	LT 0.0295	LT 0.0243	LT 0.0208	2.6000	LT 0.0417	8.1100	1.0700	3.6600	0.4000	LT 0.0330
12/28/88	05879	05880	RIFS2	2,010	LT 0.0295	LT 0.0243	LT 0.0208	1.5800	LT 0.0417	5.5900	0.8560	2.7900	0.2170	LT 0.0330
12/29/88	05895	05896	RIFS1	3,610	LT 0.0295	LT 0.0243	LT 0.0240	4.5400	LT 0.0417	8.5600	0.8960	4.0800	0.3970	LT 0.0330
12/30/88	05899	05910	RIFS1	3,460	LT 0.0295	LT 0.0243	LT 0.0240	4.5900	LT 0.0417	9.7900	0.7660	6.6800	1.0600	LT 0.0330
12/31/88	05889	05890	RIFS1	4,900	LT 0.0295	LT 0.0243	LT 0.0208	3.4200	LT 0.0417	11.800	0.9240	9.3000	0.940	0.1848
12/31/88	05893	05894	RIFS1D	4,580	LT 0.0300	LT 0.0240	LT 0.0210	4.6900	LT 0.0420	16.200	0.8420	8.1600	0.5500	LT 0.0330
12/31/88	05897	05898	RIFS2	3,700	LT 0.0300	LT 0.0240	LT 0.0210	3.4600	LT 0.0420	8.5000	1.0200	5.0200	0.3400	LT 0.0330
01/4/89	17450	17451	RIFS1	2,950	LT 0.0295	LT 0.0243	LT 0.0208	3.6400	LT 0.0417	8.7500	0.8590	11.300	0.2500	LT 0.0330
01/4/89	17454	17455	RIFS2	3,900	LT 0.0300	LT 0.0240	LT 0.0210	2.5200	LT 0.0420	5.9800	0.8760	17.000	0.2580	LT 0.0330
01/5/89	17458	17459	RIFS1	2,440	LT 0.0300	LT 0.0240	LT 0.0210	2.4720	LT 0.0420	5.1200	0.7190	32.500	0.1950	0.3200
01/5/89	17462	17463	RIFS2	2,400	LT 0.0300	LT 0.0240	LT 0.0210	2.3600	LT 0.0420	5.3500	0.5700	22.900	0.1840	0.0560
01/6/89	17460	17461	RIFS1	1,720	LT 0.0295	LT 0.0243	LT 0.0208	1.2300	LT 0.0417	3.2200	0.6470	14.400	0.1250	LT 0.0330
01/6/89	17463	17464	RIFS1	1,220	LT 0.0295	LT 0.0243	LT 0.0208	1.8800	LT 0.0417	5.6900	0.5660	1.1800	0.0841	LT 0.0330
01/7/89	17467	17468	RIFS1	0.910	LT 0.0295	LT 0.0243	LT 0.1160	0.2900	LT 0.0417	1.4900	0.8670	0.6510	0.1030	LT 0.0330

a - t/c weight 1.25 wt

b - Detected on t/c only

61 - Value is Above CRL; No Estimate Available



ALL UNITS ARE IN ug/m<sup>3</sup>

## SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VALUES ABOVE THE CRL

Sample Date	Field Sample Number	Site id	1,1,1-Trichloroethane	1,1,2-Dichloroethane	1,1,1-Dichloroethane	1,2-Dibromoethane	Styrene	Benzene	Tetrachloroethylene	Chloroform	Chloroethylene	Carbon Tetrachloride		
01/9/89	17451	17452	RIFS1	1.2900	L1 0.0295	L1 0.0243	L1 0.0208	0.4500	L1 0.0417	1.4600	0.6700	1.5400	0.0917	L1 0.0330
01/10/89	17455	17456	RIFS1	1.9000	L1 0.0295	L1 0.0243	L1 0.0208	1.3500	L1 0.0417	4.5000	0.6300	1.5100	0.1730	0.0336
01/10/89	17459	17460	RIFS2	1.2700	L1 0.0295	L1 0.0243	L1 0.0208	0.6300	L1 0.0417	2.0500	0.5900	0.6500	0.1140	0.0371
01/11/89	17464	17465	RIFS1	1.3500	L1 0.0295	L1 0.0243	L1 0.0208	1.1700	L1 0.0417	5.0800	0.7600	1.1400	0.4190	L1 0.0330
01/12/89	17468	17469	RIFS1	2.5600	L1 0.0295	L1 0.0243	L1 0.0208	3.0500	L1 0.0417	9.1200	0.8700	1.6100	0.3900	0.0331
01/13/89	16603	16604	RIFS1	4.1300	L1 0.0300	L1 0.0240	L1 0.0210	2.6900	L1 0.0420	8.5100	1.2400	1.9000	0.4550	L1 0.0330
01/14/89	16607	16608	RIFS1	3.6900	L1 0.0300	L1 0.0240	L1 0.0210	3.1100	L1 0.0420	10.300	1.2600	2.0300	0.2700	0.0330
01/14/89	16611	16612	RIFS1D	6.6100	L1 0.0300	L1 0.0240	L1 0.0210	3.4300	L1 0.0420	11.600	1.2700	2.0700	0.2900	0.0320
01/14/89	16615	16616	RIFS2	3.5700	L1 0.0300	L1 0.0240	L1 0.0210	2.8300	L1 0.0420	10.900	1.2500	1.1200	0.3620	0.0460
01/16/89	16631	16632	RIFS1	2.8300	L1 0.0295	L1 0.0243	L1 0.0208	1.6900	L1 0.0417	6.4600	1.0100	1.4200	0.2200	L1 0.0330
01/16/89	16635	16636	RIFS1D	3.3700	L1 0.0295	L1 0.0243	L1 0.0208	2.0600	L1 0.0417	6.9500	1.0000	1.5600	0.2340	L1 0.0330
01/18/89	16639	16640	RIFS2	2.3400	L1 0.0295	L1 0.0243	L1 0.0208	1.4000	L1 0.0417	5.6300	1.0500	0.9460	0.1700	0.0336
01/19/89	16647	16648	RIFS1	1.8900	L1 0.0295	L1 0.0243	L1 0.0208	3.1000	L1 0.0417	2.1300	0.5900	1.1600	0.3900	L1 0.0330
01/19/89	16651	16652	RIFS2	1.1500	L1 0.0295	L1 0.0243	L1 0.0208	3.0000	L1 0.0417	1.9700	0.7600	1.0200	0.3370	L1 0.0330
01/26/89	16663	16664	RIFS1	2.0300	L1 0.0295	L1 0.0243	L1 0.0208	1.4000	L1 0.0417	3.7900	2.3600	2.5800	0.2510	0.0403
01/27/89	16675	16676	RIFS10	3.9000	L1 0.0295	L1 0.0243	L1 0.0208	1.0600	L1 0.0417	8.8900	4.6000	3.4800	0.4170	L1 0.0330
01/31/89	16687	16688	RIFS1	3.4600	L1 0.0295	L1 0.0243	L1 0.0208	0.0771	L1 0.0417	G1 0.3470	0.6890	1.3800	0.0993	L1 0.0330

a - t/c weight &gt; 25% weight

b - Detected on t/c only

G1 - Value Is Above CR; No Estimate Available

Sample Date	Field Sample Number	Site Id	Dibromoethane	Dicyclohexene Disulfide	Ethybenzene	Toluene	Methylisobutyl Nitroso-Ketone	Trans-1,4-Diethylamine 2-Dichloroethane	Tetrachloroethene Net-a-fara-Xylene				
01/9/89	17451	17452 RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	0.3310	2.0000	LT 0.0174	LT 0.1020	LT 0.0399	0.3940	LT 0.0380	1.2200
01/10/89	17455	17456 RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	1.1300	4.9000	LT 0.0174	LT 0.1020	LT 0.0399	0.9220	0.65%	3.5500
01/10/89	17459	17460 RIFS2	LT 0.0382	LT 0.0451	LT 0.0469	0.7040	2.7100	LT 0.0174	LT 0.1020	LT 0.0399	0.5630	LT 0.0521	1.4900
01/11/89	17464	17465 RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	1.0400	6.0000	LT 0.0174	LT 0.1020	LT 0.0399	0.6350	0.0917	3.6000
01/12/89	17468	17469 RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	2.4900	10.500	LT 0.0174	LT 0.1020	LT 0.0399	2.3200	0.1900	7.7200
01/13/89	16603	16604 RIFS1	LT 0.0380	LT 0.0450	LT 0.0470	2.5500	9.9000	LT 0.0170	LT 0.1000	LT 0.0400	3.0700	0.3200	6.9000
01/14/89	16607	16608 RIFS1	LT 0.0380	LT 0.0450	LT 0.0470	2.9700	11.900	LT 0.0170	LT 0.1000	LT 0.0400	2.5900	0.1700	6.0000
01/14/89	16611	16612 RIFS10	LT 0.0380	LT 0.0450	LT 0.0470	3.2200	12.400	LT 0.0170	LT 0.1000	LT 0.0400	2.7300	0.1600	6.3900
01/14/89	16615	16616 RIFS2	LT 0.0380	LT 0.0450	LT 0.0470	2.7000	11.100	LT 0.0170	LT 0.1000	LT 0.0400	2.3500	0.1300	7.3300
01/18/89	16631	16632 RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	1.5500	6.4200	LT 0.0174	LT 0.1020	LT 0.0399	2.7700	0.1610	4.7300
01/18/89	16635	16636 RIFS10	LT 0.0382	LT 0.0451	LT 0.0469	1.0000	8.1600	LT 0.0174	LT 0.1020	LT 0.0399	3.4400	0.2010	5.6700
01/18/89	16639	16640 RIFS2	LT 0.0382	LT 0.0451	LT 0.0469	1.6600	6.3700	LT 0.0174	LT 0.1020	LT 0.0399	2.1700	0.1720	3.9000
01/19/89	16647	16648 RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	0.6870	5.8000	LT 0.0174	LT 0.1020	LT 0.0399	0.5500	0.1580	2.3000
01/27/89	16651	16652 RIFS2	LT 0.0382	LT 0.0451	LT 0.0469	0.4850	4.6000	LT 0.0174	LT 0.1020	LT 0.0399	0.4900	0.0849	1.7100
01/26/89	16663	16664 RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	1.0600	6.2600	LT 0.0174	LT 0.1020	LT 0.0399	1.1300	0.1950	3.6500
01/27/89	16675	16676 RIFS10	LT 0.0382	LT 0.0451	LT 0.0469	1.9900	13.900	LT 0.0174	LT 0.1020	LT 0.0399	2.8200	0.2040	7.0700
01/31/89	16687	16688 RIFS1	LT 0.0382	LT 0.0451	LT 0.0469	1.1800	5.3000	LT 0.0174	LT 0.1020	LT 0.0399	2.6300	0.1020	3.1500

a - t/c weight 1.25% weight

b - Detected on t/c only

C1 - Value Is Above CRL; No Estimate Available

## ALL UNITS ARE IN US/NS

## SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VALUES ABOVE THE CRL

Page 14

Sample Date	Field Sample Number	Site Id	1,1,1-Trichloroethane	1,1,2-Dichloroethane	1,1-Dichloroethane	1,2-Dibromoethane	1,2-Bis(2-chloroethyl)benzene	Bicycloheptadiene	Carbon Tetrachloride	Chloroform	Methylene Chloride				
02/1/89	16699	16700	RIFS10	0.6220	LT 0.0295	LT 0.0263	0.1660	0.3400	LT 0.0417	1.3500	1.2200	1.0100	0.1310	LT 0.0330	a
02/1/89	16719	16720	RIFS1	4.5000	LT 0.0295	LT 0.0243	6T 0.3470	5.1800	LT 0.0417	4.7500	6T 0.3470	2.8600	0.4650	0.0385	a
02/1/89	16723	16724	RIFS10	4.8100	LT 0.0295	LT 0.0243	6T 0.3470	8.0300	LT 0.0417	5.4900	4.1500	4.7200	0.6510	0.0437	a
02/1/89	16727	16728	RIFS2	4.6500	LT 0.0295	LT 0.0243	LT 0.0208	6.9800	LT 0.0417	6.5500	2.3500	1.7500	0.4750	LT 0.0330	a
02/10/89	16735	16736	RIFS1	3.3000	LT 0.0295	LT 0.0243	0.1590	6.1500	LT 0.0417	8.8600	3.4900	6.1700	0.5700	LT 0.0330	a
02/15/89	16751	16752	RIFS1	0.2640	LT 0.0295	LT 0.0243	0.2230	0.5400	LT 0.0417	0.5140	0.6850	1.2700	L1 0.0298	L1 0.0330	b
02/15/89	16759	16760	RIFS2	0.7990	LT 0.0295	LT 0.0243	6T 0.3470	0.3690	LT 0.0417	1.5600	3.4600	0.8100	0.1740	L1 0.0330	a
02/23/89	20003	20004	RIFS1	1.9500	LT 0.0295	LT 0.0243	L1 0.0208	1.2300	LT 0.0417	2.1700	0.9180	1.1300	0.1030	L1 0.0330	a
02/23/89	20007	20008	RIFS2	1.4500	L1 0.0295	L1 0.0243	L1 0.0208	0.8620	L1 0.0417	2.2800	0.6900	0.1700	0.0997	L1 0.0330	a
02/25/89	20015	20016	RIFS1	1.0200	L1 0.0295	L1 0.0243	L1 0.0208	1.3500	L1 0.0417	2.6600	0.6510	0.5960	0.0664	L1 0.0330	a
02/25/89	20019	20020	RIFS2	0.7950	L1 0.0295	L1 0.0243	L1 0.0208	0.6450	L1 0.0417	1.7600	0.6680	L1 0.0278	0.0479	L1 0.0330	b
02/26/89	20023	20024	RIFS1	0.6440	L1 0.0295	L1 0.0243	0.0993	0.0333	L1 0.0417	1.2300	0.9300	0.0613	0.1130	L1 0.0330	a
02/26/89	20027	20028	RIFS2	0.6770	L1 0.0295	L1 0.0243	0.0829	L1 0.0278	L1 0.0417	0.9840	1.1200	0.0639	0.1100	L1 0.0330	a
03/1/89	20031	20032	RIFS1	1.4800	L1 0.0295	L1 0.0243	L1 0.0208	0.5460	L1 0.0417	1.9400	0.9880	0.5560	0.2340	L1 0.0330	a
03/1/89	20035	20036	RIFS10	1.4300	L1 0.0295	L1 0.0243	L1 0.0208	0.5100	L1 0.0417	2.4400	0.7980	1.0200	0.2700	L1 0.0330	a
03/1/89	20039	20040	RIFS2	1.3700	L1 0.0295	L1 0.0243	L1 0.0208	0.4520	L1 0.0417	1.6800	1.0500	0.9850	0.2100	L1 0.0330	a
03/8/89	20049	20050	RIFS1	3.4600	L1 0.0295	L1 0.0243	0.2100	2.7600	L1 0.0417	6.7200	0.6440	2.3100	0.3900	L1 0.0330	b

a - t/c weight 1/2st weight

b - Detected on t/c only

GT - Value Is Above CR; No Estimate Available

Sample Date	Field Sample Number	Site Id	Dibromoethane	Dicyclopentadiene	Dibutyl sulfide	Ethylbenzene	Toluene	Methyl Isobutyl Nitroso-Ketone	Trans-1,4-Dimethylamino-2-Dichloroethene	Tetrachloroethene	Trichloroethene	Hepta-Chloroethene	Penta-Chloroethene	
02/1/89	16699	16700	RIFS10	LT 0.0332	LT 0.0451	LT 0.0469	0.2660	1.4600	LT 0.0174	LT 0.1020	LT 0.0399	0.2080	0.0619	0.8460
02/9/89	16719	16720	RIFS1	LT 0.0332	LT 0.0451	LT 0.0469	3.4300	23.900	LT 0.0174	LT 0.1020	LT 0.0399	2.4400	0.3360	9.7200
02/9/89	16723	16724	RIFS10	LT 0.0332	LT 0.0451	LT 0.0469	5.6900	30.600	LT 0.0174	LT 0.1020	LT 0.0399	3.0100	0.3210	14.400
02/9/89	16727	16728	RIFS2	LT 0.0332	LT 0.0451	LT 0.0469	5.3200	29.600	LT 0.0174	LT 0.1020	LT 0.0399	2.9900	0.3100	12.600
02/10/89	16735	16736	RIFS1	LT 0.0332	LT 0.0451	LT 0.0469	6.1600	10.700	LT 0.0174	LT 0.1020	LT 0.0399	3.4400	0.6100	6.6200
02/15/89	16751	16752	RIFS1	LT 0.0332	LT 0.0451	LT 0.0469	0.4450	5.1400	LT 0.0174	LT 0.1020	LT 0.0399	0.3520	LT 0.0330	1.5800
02/15/89	16759	16760	RIFS2	LT 0.0332	LT 0.0451	LT 0.0469	0.3320	4.1500	LT 0.0174	LT 0.1020	LT 0.0399	0.2790	LT 0.0330	1.0200
02/23/89	20033	20034	RIFS1	LT 0.0332	LT 0.0451	LT 0.0469	1.2300	5.4600	LT 0.0174	LT 0.1020	LT 0.0399	0.9560	0.1110	2.5600
02/23/89	20037	20038	RIFS2	LT 0.0332	LT 0.0451	LT 0.0469	0.7930	4.8300	LT 0.0174	LT 0.1020	LT 0.0399	0.6550	0.0631	2.2100
02/25/89	20015	20016	RIFS1	LT 0.0332	LT 0.0451	LT 0.0469	1.0500	6.3200	LT 0.0174	LT 0.1020	LT 0.0399	0.9120	LT 0.0330	2.8600
02/25/89	20019	20020	RIFS2	LT 0.0332	LT 0.0451	LT 0.0469	0.5380	3.2300	LT 0.0174	LT 0.1020	LT 0.0399	0.4300	LT 0.0330	1.8300
02/26/89	20023	20024	RIFS1	LT 0.0332	LT 0.0451	LT 0.0469	0.0353	0.3170	LT 0.0174	LT 0.1020	LT 0.0399	0.1850	LT 0.0330	LT 0.1410
02/26/89	20027	20028	RIFS2	LT 0.0332	LT 0.0451	LT 0.0469	0.0310	0.2750	LT 0.0174	LT 0.1020	LT 0.0399	0.1600	LT 0.0330	LT 0.1410
03/1/89	20031	20032	RIFS1	LT 0.0332	LT 0.0451	LT 0.0469	0.5150	3.4800	LT 0.0174	LT 0.1020	LT 0.0399	0.5150	LT 0.0330	1.7500
03/1/89	20035	20036	RIFS10	LT 0.0332	LT 0.0451	LT 0.0469	0.5100	3.6400	LT 0.0174	LT 0.1020	LT 0.0399	0.613470	LT 0.0330	1.5300
03/1/89	20039	20040	RIFS2	LT 0.0332	LT 0.0451	LT 0.0469	0.3960	3.1300	LT 0.0174	LT 0.1020	LT 0.0399	0.4610	LT 0.0330	1.3300
03/6/89	20049	20050	RIFS1	LT 0.0332	LT 0.0451	LT 0.0469	2.2600	21.000	LT 0.0174	LT 0.1020	LT 0.0399	1.8200	0.1570	6.3300

a - t/c weight 1.25t weight

b - Detected on t/c only

g - Value is Above CR; No Estimate Available

## ALL UNITS ARE IN 16/16/13

## SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VALUES ABOVE THE CRL

Page 16

Date	Sample	Field Sample	Site id	1,1,1-Trichloroethane	1,1,2-Dichloroethane	1,1,2-Dichloroethene	1,2-Dibromoethane	Benzene	Carbon Tetrachloride	Chloroform	Methylene Chloride	Chlorobenzene	
03/08/89	20053	20054	RIFS2	2.6400	L1 0.0295	L1 0.0243	L1 0.0208	2.1000	L1 0.0417	5.7300	0.6210	2.7700	0.1300
03/10/89	20061	20062	RIFS1	1.4600	L1 0.0300	L1 0.0240	L1 0.0210	1.5700	L1 0.0420	61 0.3500	0.7210	3.6100	0.1910
03/10/89	20065	20066	RIFS2	1.5700	L1 0.0295	L1 0.0243	L1 0.0208	1.1800	L1 0.0417	3.3700	1.0900	61 0.3470	0.2650
03/16/89	20069	20070	RIFS1	1.4200	L1 0.0295	L1 0.0243	L1 0.0210	1.2700	L1 0.0417	2.2100	2.8300	20.50	0.2220
03/16/89	20073	20074	RIFS1D	1.6600	L1 0.0295	L1 0.0243	L1 0.0210	1.5100	L1 0.0417	2.8400	0.7520	2.7500	0.0800
03/16/89	20077	20078	RIFS2	1.1200	L1 0.0295	L1 0.0243	L1 0.0210	0.3380	L1 0.0417	1.5200	1.2400	4.9100	0.1300
03/18/89	20081	20082	RIFS1	0.9210	L1 0.0295	L1 0.0243	L1 0.0210	0.4610	L1 0.0417	2.4100	0.6870	0.7510	0.1730
03/18/89	20085	20086	RIFS2	0.7390	L1 0.0295	L1 0.0243	L1 0.0210	0.1150	L1 0.0417	1.6200	0.6510	0.3750	0.0934
03/21/89	20089	20090	RIFS1	8.7500	L1 0.0295	L1 0.0243	L1 0.0210	1.1300	L1 0.0417	2.3500	0.6140	4.5800	0.1960
03/22/89	20093	20094	RIFS1	61 0.3470	L1 0.0295	L1 0.0243	L1 0.0210	0.0459	L1 0.0417	61 0.3470	0.5430	0.9610	0.1350
03/31/89	20109	20110	RIFS1	0.7380	L1 0.0295	L1 0.0243	L1 0.0210	0.3240	L1 0.0417	1.8600	0.2620	0.3860	0.0208
03/31/89	20113	20114	RIFS1D	0.8240	L1 0.0295	L1 0.0243	L1 0.0210	0.1030	L1 0.0417	1.8800	0.3220	0.3850	0.0208
04/06/89	20116	20117	RIFS1	0.6040	L1 0.0295	L1 0.0243	L1 0.0210	0.3960	L1 0.0417	0.7010	0.2990	0.5910	0.0208
04/07/89	20119	20120	RIFS1	0.5120	L1 0.0295	L1 0.0243	L1 0.0210	0.3470	L1 0.0417	0.7720	0.2600	0.4250	0.0208
04/11/89	20125	20126	RIFS1	0.9150	L1 0.0295	L1 0.0243	L1 0.0210	0.0969	L1 0.0417	2.1600	0.4290	0.7200	0.1540
04/14/89	20128	20129	RIFS1	1.1200	L1 0.0295	L1 0.0243	L1 0.0210	1.2900	L1 0.0417	2.8600	0.2380	1.0500	0.0864
04/14/89	20131	20132	RIFS1D	1.2200	L1 0.0295	L1 0.0243	L1 0.0210	1.4600	L1 0.0417	3.3500	0.3670	1.6600	0.0533

a - t/c weight 1.25x weight

b - Detected on t/c only

61 - Value is Above CRL; No Estimate Available

Sample Date Number	Field Sample Site id	Dibromoethane	Diclophenylmethane	Diethylsulfide	Ethylbenzene	Toluene	Methylisobutyl Nitros-Ketone	Trans-, diethylamine	2-Dichloroethene	Tetrachloroethene	Trichloroethene	meta- & para-Xylene
03/18/89 20853 20854 RIFS2 LT 0.0382	LT 0.0451	LT 0.0469	2.0600	16.500	LT 0.0174	LT 0.1020	LT 0.0399	2.5900	0.0736	6.4100		
03/19/89 20851 20852 RIFS1 LT 0.0380	LT 0.0450	LT 0.0470	1.1400	10.000	LT 0.0170	LT 0.1000	LT 0.0400	1.4300	0.1300	3.9300		
03/19/89 20855 20856 RIFS2 LT 0.0382	LT 0.0451	LT 0.0469	0.8430	11.800	LT 0.0174	LT 0.1020	LT 0.0399	1.1200	LT 0.0350	3.5400		
03/16/89 20859 20870 RIFS1 LT 0.0382	LT 0.0451	LT 0.0469	0.8900	8.4200	LT 0.0174	LT 0.1020	LT 0.0399	0.8240	0.1020	3.5200		
03/16/89 20773 20774 RIFS10 LT 0.0382	LT 0.0451	LT 0.0469	1.0700	8.7600	LT 0.0174	LT 0.1020	LT 0.0399	0.8120	0.0976	4.0600		
03/16/89 20777 20778 RIFS2 LT 0.0382	LT 0.0451	LT 0.0469	0.5780	5.7800	LT 0.0174	LT 0.1020	LT 0.0399	0.5050	0.0654	2.2700		
03/16/89 20831 20832 RIFS1 LT 0.0382	LT 0.0451	LT 0.0469	0.3900	4.6100	LT 0.0174	LT 0.1020	LT 0.0399	0.3400	LT 0.0330	1.5200		
03/16/89 20845 20846 RIFS2 LT 0.0382	LT 0.0451	LT 0.0469	0.2580	2.8900	LT 0.0174	LT 0.1020	LT 0.0399	0.2310	LT 0.0350	1.0600		
03/21/89 20859 20860 RIFS1 LT 0.0382	LT 0.0451	LT 0.0469	0.8030	6.0000	LT 0.0174	LT 0.1020	LT 0.0399	0.9490	0.1140	2.8600		
03/22/89 20853 20854 RIFS1 LT 0.0382	LT 0.0451	LT 0.0469	67.3470	67.3470	LT 0.0174	LT 0.1020	LT 0.0399	67.3470	LT 0.0330	67.3470		
03/31/89 20859 20860 RIFS1 LT 0.0382	LT 0.0451	LT 0.0469	0.5730	3.9400	LT 0.0174	LT 0.1020	LT 0.0399	0.5380	LT 0.0350	3.0100		
03/31/89 20813 20814 RIFS10 LT 0.0382	LT 0.0451	LT 0.0469	0.5920	3.8300	LT 0.0174	LT 0.1020	LT 0.0399	0.4960	LT 0.0330	2.4600		
04/6/89 20816 20817 RIFS1 LT 0.0382	LT 0.0451	LT 0.0469	0.2240	1.4600	LT 0.0174	LT 0.1020	LT 0.0399	0.1050	LT 0.0330	1.0700		
04/7/89 20819 20820 RIFS1 LT 0.0382	LT 0.0451	LT 0.0469	0.5320	4.2400	LT 0.0174	LT 0.1020	LT 0.0399	0.3900	LT 0.0330	0.6160		
04/11/89 20825 20826 RIFS1 LT 0.0382	LT 0.0451	LT 0.0469	0.0721	0.4930	LT 0.0174	LT 0.1020	LT 0.0399	0.4320	LT 0.0330	0.2190		
04/14/89 20828 20829 RIFS1 LT 0.0382	LT 0.0451	LT 0.0469	0.8990	8.6300	LT 0.0174	LT 0.1020	LT 0.0399	1.5500	LT 0.0330	4.3200		
04/14/89 20831 20832 RIFS10 LT 0.0382	LT 0.0451	LT 0.0469	1.0400	10.4000	LT 0.0174	LT 0.1020	LT 0.0399	1.6700	LT 0.0330	5.5600		

a - t/c weight, 1/2st weight

b - Detected on t/c only

61 - Value is Above CRL; No Estimate Available

## SUMMARY OF VOLATILE ORGANIC COMPOUNDS INCLUDES ESTIMATED VALUES ABOVE THE CRL

Sample Date	Field Sample Number	Site Id	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,2-Dichloroethane	1,2-Bis(chloromethyl)benzene	Benzene	Tetrachloroethylene	Chloroform	Carbon Tetrachloride	Methylene Chlorobenzene	
04/19/89	20134	RIFS1	2.6700	LT 0.0295	LT 0.0243	LT 0.0208	3.0500	LT 0.0417	2.3100	0.3070	1.4000	0.0404	
04/21/89	20137	RIFS1	1.0400	LT 0.0295	LT 0.0243	0.0368	1.0100	LT 0.0417	0.5120	0.2230	2.8500	0.0443	
04/25/89	20143	RIFS1	0.8500	LT 0.0295	LT 0.0243	0.0271	0.1940	LT 0.0417	0.8180	0.5030	3.3100	0.1070	
04/25/89	20146	RIFS10	0.9510	LT 0.0295	LT 0.0243	0.0354	0.1780	LT 0.0417	0.8920	0.6290	3.3550	0.1410	
04/26/89	20149	RIFS1	0.4870	LT 0.0295	LT 0.0243	0.0237	0.7470	LT 0.0417	2.6700	0.2440	0.9560	0.0250	
05/15/89	20152	20153	RIFS1	1.0500	LT 0.0295	LT 0.0243	0.0529	0.5490	LT 0.0417	1.3900	0.2940	0.6050	0.0529
					b						b		

a - t/c weight 1.25x weight

b - Detected on t/c only

GT - Value Is Above Crl; No Estimate Available

ALL UNITS ARE IN US/M3

## Summary of volatile organic compounds estimated within 800 ft. of the oil

Page 19

Sample Date	Field Sample Number	Site Id	Nitrochloroform	Dicyclopentadiene	Oleic acid	Toluene	Ethylbenzene	Styrene	Methylisobutyl Ketone	N-Nitroso-diethylamine	Trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Penta-Chloroethene	Per- <i>X</i> -Ylene
04/19/89 20134	RIFS1	L1 0.0382	L1 0.0451	L1 0.0469	1.4400	17.800	L1 0.0174	L1 0.0200	L1 0.0399	2.1000	0.2090	0.7020			
04/21/89 20137	RIFS1	L1 0.0382	L1 0.0451	L1 0.0469	0.6500	1.6000	L1 0.0174	L1 0.0200	L1 0.0399	1.0600	L1 0.0330	1.0000			
04/25/89 20143	RIFS1	L1 0.0382	L1 0.0451	L1 0.0469	0.1370	1.2700	L1 0.0174	L1 0.0200	L1 0.0399	0.3300	L1 0.0330	61 0.6940			
04/25/89 20146	RIFS1	L1 0.0382	L1 0.0451	L1 0.0469	0.1250	0.3470	L1 0.0174	L1 0.0200	L1 0.0399	0.3160	L1 0.0330	61 0.5200			
04/26/89 20149	RIFS1	L1 0.0382	L1 0.0451	L1 0.0469	0.5340	6.9600	L1 0.0174	L1 0.0200	L1 0.0399	0.3860	L1 0.0330	2.1000			
05/15/89 20152	RIFS1	L1 0.0382	L1 0.0451	L1 0.0469	0.3560	5.8600	L1 0.0174	L1 0.0200	L1 0.0399	0.7330		0.0926			

० - १० अंग्रेज़ । २५१ अंग्रेज़

- Date generated 1/1/2014

**B = Percentage of t/c gully**

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF SEMI-VOLATILES FOR RIFS

ALL UNITS ARE IN ug/m<sup>3</sup>

FIELD		SAMPLE DATE	SAMPLE NUMBER	SITE ID	ATRAZINE	CHLORDANE	CHLOROPHENYL METHYLSULFOXIDE	CHLOROPHENYL METHYLSULFONE	DIELDRIN	ENDRIN
10/22/88	05701	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
10/26/88	05702	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
10/29/88	05703	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
11/2/88	05705	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
11/8/88	05706	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
11/10/88	05708	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
11/17/88	05712	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
11/19/88	05713	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
11/22/88	05717	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
11/23/88	05718	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/1/88	05722	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/2/88	05723	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/6/88	05726	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/10/88	05729	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/13/88	05731	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/15/88	05732	RIFS1D	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/16/88	05733	RIFS1C	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/21/88	05739	RIFS2	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/21/88	05740	RIFS1	LT 0.0799	LT 0.0295		LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
12/22/88	05741	RIFS1	LT 0.0800	LT 0.0300		LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210	
12/22/88	05742	RIFS2	LT 0.0800	LT 0.0300		LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210	
12/28/88	05745	RIFS1	LT 0.0800	LT 0.0300		LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210	
12/28/88	05766	RIFS2	LT 0.0800	LT 0.0300		LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210	
12/29/88	05747	RIFS1	LT 0.0800	LT 0.0300		LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210	
12/30/88	05769	RIFS1	LT 0.0800	LT 0.0300		LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210	

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF SEMI-VOLATILES FOR PIFS

ALL UNITS ARE IN UG/M<sup>3</sup>

FIELD							
SAMPLE DATE	SAMPLE NUMBER	SITE ID	ISODRIN	MALATHION	DDE	DDT	PARATHION
SUPONA							

10/22/88	05701	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
10/26/88	05702	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
10/29/88	05703	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
11/2/88	05705	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
11/8/88	05706	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
11/10/88	05708	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
11/17/88	05712	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
11/19/88	05713	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
11/22/88	05717	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
11/23/88	05718	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/1/88	05722	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/2/88	05723	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/6/88	05726	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/10/88	05729	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/13/88	05731	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/15/88	05732	RIFS1D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/16/88	05733	RIFS1C	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/21/88	05739	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/21/88	05740	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
12/22/88	05741	RIFS1	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
12/22/88	05742	RIFS2	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
12/28/88	05745	RIFS1	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
12/28/88	05746	RIFS2	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
12/29/88	05747	RIFS1	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
12/30/88	05749	RIFS1	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF SEMI-VOLATILES FOR RIFS

ALL UNITS ARE IN ug/MC

SAMPLE DATE	SAMPLE NUMBER	SITE ID	ATRAZINE	CHLORDANE	CHLOROPHENYL	CHLOROPHENYL	DIELDRIN	ENDRIN
					METHYLSULFOXIDE	METHYLSULFONE		
12/31/88	05751	RIFS1	LT 0.0800	LT 0.0300	LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210
12/31/88	05753	RIFS2	LT 0.0800	LT 0.0300	LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210
01/4/89	05755	RIFS1	LT 0.0800	LT 0.0300	LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210
01/4/89	05756	RIFS2	LT 0.0800	LT 0.0300	LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210
01/5/89	05757	RIFS1	LT 0.0800	LT 0.0300	LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210
01/5/89	05758	RIFS2	LT 0.0800	LT 0.0300	LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210
01/6/89	05761	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/7/89	05763	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/9/89	19761	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/10/89	19762	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/10/89	19763	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/11/89	05765	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/12/89	05766	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/18/89	05775	RIFS1	LT 0.0800	LT 0.0300	LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210
01/18/89	05776	RIFS10	LT 0.0800	LT 0.0300	LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210
01/18/89	05778	RIFS2	LT 0.0800	LT 0.0300	LT 0.1800	LT 0.1000	LT 0.0350	LT 0.0210
01/19/89	05779	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/19/89	05780	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/26/89	05789	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/26/89	19765	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/27/89	16001	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/27/89	16002	RIFS10	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/27/89	16004	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/31/89	16007	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
01/31/89	16008	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF SEMI-VOLATILES FOR PIFS

ALL UNITS APE IN ug/m<sup>3</sup>

SAMPLE DATE	SAMPLE NUMBER	FIELD SITE	ISODRIN	MALATHION	DDE	DDT	PARATHION	SUPONA
			ID					

12/31/88	05751	RIFS1	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
12/31/88	05753	RIFS2	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
01/4/89	05755	RIFS1	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
01/4/89	05756	RIFS2	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
01/5/89	05757	RIFS1	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
01/5/89	05760	RIFS2	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
01/6/89	05761	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/7/89	05763	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/9/89	19741	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/10/89	19742	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/10/89	19743	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/11/89	05765	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/12/89	05766	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/18/89	05775	RIFS1	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
01/18/89	05776	RIFS10	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
01/18/89	05778	RIFS2	LT 0.0450	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0180	LT 0.0420
01/19/89	05779	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/19/89	05780	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/26/89	05789	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/26/89	19765	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/27/89	16001	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/27/89	16002	RIFS10	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/27/89	16004	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/31/89	16007	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
01/31/89	16008	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/93

## SUMMARY OF SEMI-VOLATILES FOR RIFS

ALL UNITS ARE IN ug/m<sup>3</sup>

FIELD		SAMPLE	SITE	ATRAZINE	CHLORDANE	CHLOROPHENYL METHYL SULFOXIDE	CHLOROPHENYL METHYL SULFONE	DIELDRIN	ENDRIN
DATE	NUMBER	ID							
02/1/89	16009	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/1/89	16010	RIFS1D	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/1/89	16012	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/9/89	16021	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/9/89	16023	RIFS1D	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/9/89	16024	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/10/89	16026	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/10/89	16027	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/14/89	16028	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/14/89	16029	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/15/89	16030	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/15/89	16031	RIFS1D	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/15/89	16032	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/23/89	16034	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/23/89	16041	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/25/89	16044	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/25/89	16045	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/28/89	16046	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
02/28/89	16047	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/1/89	16048	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/1/89	16049	RIFS1D	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/1/89	16050	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/8/89	16055	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/8/89	16057	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/10/89	16061	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

01/18/90

SUMMARY OF SEMI-VOLATILES FOR RIFS

ALL UNITS ARE IN UG/M<sup>3</sup>

SAMPLE DATE	SAMPLE NUMBER	SITE ID	FIELD				
			ISOORIN	MALATHION	DOE	DDT	PARATHION

02/1/89	16009	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/1/89	16010	RIFS1D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/1/89	16012	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/9/89	16021	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/9/89	16023	RIFS1D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/9/89	16024	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/10/89	16025	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/10/89	16027	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/14/89	16028	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/14/89	16029	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/15/89	16030	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/15/89	16031	RIFS1D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/15/89	16032	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/23/89	16039	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/23/89	16041	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/25/89	16044	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/25/89	16045	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/25/89	16046	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
02/28/89	16047	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/1/89	16048	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/1/89	16049	RIFS1D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/1/89	16050	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/8/89	16055	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/8/89	16057	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/10/89	16061	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF SEMI-VOLATILES FOR RIFS

ALL UNITS ARE IN UG/M<sup>3</sup>

SAMPLE DATE	SAMPLE NUMBER	SITE ID	ATRAZINE	CHLORDANE	FIELD	CHLOROPHENYL METHYLSULFOXIDE	CHLOROPHENYL METHYLSULFONE	CIELDRIN	ENDRIN
					LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212
03/10/89	16062	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/16/89	16065	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/16/89	16066	RIFS10	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/16/89	16067	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/18/89	16070	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/19/89	16071	RIFS2	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/21/89	16072	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/22/89	16073	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/24/89	16076	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/29/89	16079	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/31/89	16087	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
03/31/89	16090	RIFS10	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
04/6/89	16088	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
04/7/89	16090	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
04/14/89	16095	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
04/14/89	16096	RIFS10	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
04/19/89	16097	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
04/21/89	16098	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
04/25/89	16100	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
04/25/89	16101	RIFS10	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
04/26/89	16102	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	
05/5/89	16103	RIFS1	LT 0.0799	LT 0.0295	LT 0.1810	LT 0.1010	LT 0.0347	LT 0.0212	

EBASCO SERVICES

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF SEMI-VOLATILES FOR RIFS

ALL UNITS ARE IN ug/MT

## FIELD

SAMPLE DATE	SAMPLE NUMBER	SITE ID	ISODRIN	MALATHION	DDT	PARATHION	SUPONA
-------------	---------------	---------	---------	-----------	-----	-----------	--------

03/10/89	16062	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/16/89	16065	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/16/89	16066	RIFS1D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/16/89	16067	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/18/89	16070	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/18/89	16071	RIFS2	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/21/89	16072	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/21/89	16073	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/24/89	16074	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/29/89	16075	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/31/89	16087	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
03/31/89	16088	RIFS1D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
04/6/89	16089	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
04/7/89	16090	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
04/14/89	16095	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
04/14/89	16096	RIFS1D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
04/19/89	16097	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
04/21/89	16098	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
04/25/89	16100	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
04/25/89	16101	RIFS1D	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
04/26/89	16102	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417
05/5/89	16103	RIFS1	LT 0.0451	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0181	LT 0.0417

EBASCO SERVICES INCORPORATED

ROCKY MOUNTAIN ARSENAL PROGRAM

06/18/90

## SUMMARY OF ORGANIC CHLORINE PESTICIDE CONCENTRATIONS

RIFS

ALL UNITS ARE IN ug/m<sup>3</sup>

FIELD										
SAMPLE DATE	SAMPLE NUMBER	SITE ID	ALDRIN RESULTS	CHLORDANE RESULTS	DIELDRIN RESULTS	ENDDTN RESULTS	ISODDTN RESULTS	PPDDDE RESULTS	PPDDT RESULTS	
03/21/89	16072	RIFS1	LT 0.0003	LT 0.0006	0.0005	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
03/22/89	16073	RIFS1	LT 0.0003	LT 0.0004	LT 0.0023	LT 0.0003	LT 0.0003	LT 0.0003	0.0002	
03/26/89	16076	RIFS1	LT 0.0003	LT 0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
03/29/89	16078	RIFS1	LT 0.0003	LT 0.0004	0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
03/31/89	16087	RIFS1	LT 0.0003	LT 0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	0.0005	
03/31/89	16088	RIFS1D	LT 0.0003	LT 0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/6/89	16089	RIFS1	LT 0.0003	LT 0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/7/89	16090	RIFS1	LT 0.0003	LT 0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/11/89	16094	RIFS1	LT 0.0003	LT 0.0004	0.0006	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/14/89	16095	RIFS1	LT 0.0003	LT 0.0004	0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/14/89	16096	RIFS1D	LT 0.0003	LT 0.0004	0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/19/89	16097	RIFS1	LT 0.0003	LT 0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/21/89	16098	RIFS1	LT 0.0003	LT 0.0004	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/25/89	16100	RIFS1	LT 0.0003	0.0005	0.0006	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/25/89	16101	RIFS1D	LT 0.0003	0.0006	0.0006	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
04/26/89	16102	RIFS1	LT 0.0003	0.0006	LT 0.0007	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	
05/5/89	16103	RIFS1	LT 0.0003	LT 0.0004	LT 0.0007	LT 0.0003	LT 0.0003	LT 0.0003	LT 0.0003	